This is a digital copy of a book that was preserved for generations on library shelves before it was carefully scanned by Google as part of a project to make the world's books discoverable online.

It has survived long enough for the copyright to expire and the book to enter the public domain. A public domain book is one that was never subject to copyright or whose legal copyright term has expired. Whether a book is in the public domain may vary country to country. Public domain books are our gateways to the past, representing a wealth of history, culture and knowledge that's often difficult to discover.

Marks, notations and other marginalia present in the original volume will appear in this file - a reminder of this book's long journey from the publisher to a library and finally to you.

Usage guidelines

Google is proud to partner with libraries to digitize public domain materials and make them widely accessible. Public domain books belong to the public and we are merely their custodians. Nevertheless, this work is expensive, so in order to keep providing this resource, we have taken steps to prevent abuse by commercial parties, including placing technical restrictions on automated querying.

We also ask that you:

+ *Make non-commercial use of the files* We designed Google Book Search for use by individuals, and we request that you use these files for personal, non-commercial purposes.
+ *Refrain from automated querying* Do not send automated queries of any sort to Google's system: If you are conducting research on machine translation, optical character recognition or other areas where access to a large amount of text is helpful, please contact us. We encourage the use of public domain materials for these purposes and may be able to help.
+ *Maintain attribution* The Google "watermark" you see on each file is essential for informing people about this project and helping them find additional materials through Google Book Search. Please do not remove it.
+ *Keep it legal* Whatever your use, remember that you are responsible for ensuring that what you are doing is legal. Do not assume that just because we believe a book is in the public domain for users in the United States, that the work is also in the public domain for users in other countries. Whether a book is still in copyright varies from country to country, and we can't offer guidance on whether any specific use of any specific book is allowed. Please do not assume that a book's appearance in Google Book Search means it can be used in any manner anywhere in the world. Copyright infringement liability can be quite severe.

About Google Book Search

Google's mission is to organize the world's information and to make it universally accessible and useful. Google Book Search helps readers discover the world's books while helping authors and publishers reach new audiences. You can search through the full text of this book on the web at `http://books.google.com/`

BG
1200

Digitized by Google

HARVARD UNIVERSITY

LIBRARY OF THE
MINERALOGICAL
LABORATORY
UNIVERSITY MUSEUM

Digitized by Google

Digitized by Google

Digitized by Google

DEPARTMENT OF THE INTERIOR
UNITED STATES GEOLOGICAL SURVEY
GEORGE OTIS SMITH, DIRECTOR

BULLETIN 562

RESULTS OF SPIRIT LEVELING IN VIRGINIA

1900 TO 1913, INCLUSIVE

R. B. MARSHALL, CHIEF GEOGRAPHER

Part of work since 1907 done in cooperation with State of Virginia
through Virginia Geological Survey
T. L. Watson, State Geologist

WASHINGTON
GOVERNMENT PRINTING OFFICE
1914

Digitized by Google

Digitized by Google

CONTENTS.

	Page.
Introduction	5
Cooperation	5
Previous publication	5
Personnel	5
Classification	5
Bench marks	6
Datum	6
Topographic maps	7
Precise leveling	8
Bonsacks, Cahas Mountain, Callaghan, Clarksville, Clifton Forge, Eagle Rock, Martinsville, Natural Bridge, and Rocky Mount quadrangles (Alleghany, Botetourt, Franklin, Henry, Mecklenburg, and Roanoke counties)	8
Bramwell and Peterstown quadrangles (Giles and Tazewell counties)	13
Primary leveling	14
Hallwood and Snow Hill quadrangles (Accomac County)	14
Hampton, Isle of Wight, Surry, Toano, Williamsburg, and Yorktown quadrangles (Gloucester, Isle of Wight, James City, Surry, Warwick, and York counties)	14
Fairfax, Haymarket, Indian Head, Seneca, and Washington quadrangles (Fairfax, Loudoun, and Prince William counties)	17
Boydton, Brookneal, Cahas Mountain, Callands, Chatham, Clarksville, Clover, Lynchburg, Moneta, Nathalie, and Virgilina quadrangles (Campbell, Charlotte, Halifax, Mecklenburg, and Pittsylvania counties)	25
Bonsacks, Craigs Creek, Eagle Rock, and Natural Bridge quadrangles (Botetourt, Craig, and Rockbridge counties)	31
Antietam quadrangle (Loudoun County)	35
Bramwell quadrangle (Tazewell County)	36
Middlesboro quadrangle (Lee County)	37
Abingdon quadrangle, embracing Damascus, Glade Springs, Marion, and Mount Rogers 15′ quadrangles (Grayson, Russell, Smyth, and Washington counties)	38
Big Stone Gap, Bramwell, Bucu, Burkes Garden, Clintwood, Coeburn, Glade Springs, Hagan, Hansonville, Middlesboro, Nolansburg, Pound, Pounding Mill, Regina, Richlands, Sneedville, and Wise quadrangles (Dickenson, Lee, Russell, Tazewell, and Wise counties)	41
Peterstown quadrangle (Giles County)	56
Appendix A: Elevations adjusted by the Coast and Geodetic Survey from precise leveling	58
Appendix B: Secondary elevations	62
Index	65

ILLUSTRATION.

	Page.
PLATE I. Geological Survey bench marks	5

Digitized by Google

Digitized by Google

Digitized by Google

GEOLOGICAL SURVEY STATION MARKS.

A, Tablet used in cooperating States. The State name is inserted at *G*.
B and *D*, Copper temporary bench mark, consisting of a nail and copper washer.
A, *C*, and *E*, Tablets for stone or concrete structures.
F, Iron post used where there is no rock.

Digitized by Google

RESULTS OF SPIRIT LEVELING IN VIRGINIA, 1900 TO 1913, INCLUSIVE.

R. B. MARSHALL, Chief Geographer.

INTRODUCTION.

Cooperation.—The State of Virginia contributed financially, through the Virginia Geological Survey, Thomas L. Watson, State Geologist, to part of the work done since 1907.

Previous publication.—That portion of the results of spirit leveling in Virginia previously published in Bulletin 434, containing descriptions and elevations of bench marks established in Delaware, District of Columbia, Maryland, and Virginia from 1896 to 1909, inclusive, and based on the 1903 adjustment, has been corrected to agree with the 1907 adjustment of precise leveling of the Coast and Geodetic Survey, and is here republished, together with the results of spirit leveling by the United States Geological Survey in Virginia since 1909. The elevations by the 1907 adjustment were not changed by the 1912 adjustment and are not likely to be changed by any future adjustment of the level net.

Personnel.—The field work from 1900 to 1906, inclusive, was done under the direction of H. M. Wilson, geographer, and that from 1907 to 1911, inclusive, was done under Frank Sutton, geographer. The work since January, 1908, was done under the general direction of R. B. Marshall, chief geographer. Credit is given in the headings of the several lists to the respective levelmen. The office work of computation, adjustment, and preparation of lists was done mainly by S. S. Gannett, geographer, under the general direction of E. M. Douglas, geographer.

Classification.—The elevations are classified as precise or primary, according to the methods employed in their determination. The former are determined by lines of levels run either in both forward and backward directions or by simultaneous double-rodded lines, a high-grade instrument being used and special precautions being taken in

Digitized by Google

observations and reduction to correct errors and make the line continuously good throughout. The latter or primary levels are determined with the Y level, precautions being taken against only the principal errors and the levels being run mostly in circuits of single lines. The allowable limit of error observed on the precise work already done by the Geological Survey in this State is represented in feet by $0.03\sqrt{D}$ and that for the primary work by $0.05\sqrt{D}$, in which D is the length of circuit in miles.

Bench marks.—The standard bench marks are of two forms. The first form is a circular bronze or aluminum tablet (*C* and *E*, Pl. I), 3½ inches in diameter and ¼ inch thick, having a 3-inch stem, which is cemented in a drill hole in solid rock in the wall of some public building, a bridge abutment, or other substantial masonry structure. The second form (*F*, Pl. I), used where masonry or rock is not available, consists of a hollow wrought-iron post 3½ inches in outer diameter and 4 feet in length. It is split at the bottom and spread out to a width of 10 inches in order to give a firm bearing on the earth, and is set about 3 feet in the ground. A bronze or aluminum-bronze cap is riveted upon the top of the post. A third style of bench mark with abbreviated lettering (*B* and *D*, Pl. I), is used for unimportant points. This consists of a special copper nail 1½ inches in length driven through a copper washer ⅞ inch in diameter. The tablets as well as the caps on the iron posts are appropriately lettered, and cooperation by States is indicated by the addition of the State name (*G*, Pl. I).

The numbers stamped on the bench marks described in the following pages represent the elevations to the nearest foot as determined by the levelman. These numbers are stamped with $\frac{3}{16}$-inch steel dies on the tablets of post caps, to the left of the word "Feet." The office adjustment of the notes and the reduction to mean sea level datum may so change some of the figures that the original markings are 1 or 2 feet in error. It is assumed that engineers and others who have occasion to use the bench-mark elevations will apply to the Director of the United States Geological Survey, at Washington, D. C., for the adjusted values, and will use the markings as identification numbers only.

Datum.—All United States Geological Survey elevations are referred to mean sea level, which is the level that the sea would assume if the influence of winds and tides were eliminated. This level is not the elevation determined from the mean of the highest and the lowest tides, nor is it the half sum of the mean of all the high tides and the mean of all the low tides, which is called the half-tide level. Mean sea level is the average height of the water, all stages of the tide being considered. It is determined from observations made by

Digitized by Google

means of tidal gages placed at stations where local conditions, such as long, narrow bays, rivers, and like features, will not affect the height of the water. To obtain even approximately correct results these observations must extend over at least one lunar month, and if accuracy is desired they must extend over several years. At ocean stations the half-tide level and the mean sea level usually differ but little. It is assumed that there is no difference between the mean sea levels determined from observations in the Atlantic Ocean, the Gulf of Mexico, and the Pacific Ocean.

The connection with tidal stations for bench marks in certain areas that lie at some distance from the seacoast is still uncertain, and this fact is indicated by the addition of a letter or word to the right of the word "Datum" on tablets or posts. For such areas corrections for published results will be made from time to time as the precise-level lines of the United States Geological Survey or other Government organizations are extended.

Topographic maps.—Maps of the following quadrangles wholly or partly in Virginia have been published by the United States Geological Survey up to September 1, 1914. They may be obtained for 10 cents each or $3 for 50, except as otherwise noted, on application to the Director of the Survey at Washington, D. C.

Abingdon (Va.-Tenn.-N. C.).
Amelia.
Antietam (Md.-Va.-W. Va.).[1]
Appomattox.
Bermuda Hundred.
Beverly (W. Va.-Va.).
Bristol (Va.-Tenn.).
Buckingham.
Christiansburg (Va.-W.-Va.).
Crisfield (Md.-Va.).
Cumberland Gap (Ky.-Va.-Tenn.).
Dublin (Va.-W. Va.).
Estillville (Va.-Tenn.-Ky.).
Farmville.
Franklin (W. Va.-Va.).
*Frederick (Md.-Va.).[2]
Fredericksburg (Va.-Md.).
Goochland.
Gordonsville.
Green Run (Md.-Va.).
Grundy (Va.-Ky.).
Hampton.
Harpers Ferry (Va.-W. Va.-Md.).[1]
Harrisonburg.
Hillsville (Va.-N. C.).
Jonesville (Ky.-Va.-Tenn.).
Lewisburg (Va.-W. Va.).
Lexington.
Luray.
Lynchburg.
Monterey (Va.-W. Va.).
Montross (Va.-Md.).[3]
Mount Vernon (Va.-Md.-D. C.).[4]
Natural Bridge.[5]
Natural Bridge special.[5]
Nomini (Md.-Va.).[3]
*Norfolk (Va.-N. C.).[6]
Norfolk (Va.-N. C.), double sheet, 20 cts.[6]
Norfolk special.
Oceana (W. Va.-Va.-Ky.).
Palmyra.
Petersburg.
Piney Point (Md.-Va.).[3]
Pocahontas (Va.-W. Va.).

* Out of print.
[1] Antietam sheet shows part of Harpers Ferry quadrangle on larger scale.
[2] Rockville and Seneca sheets show parts of Frederick quadrangle on larger scale.
[3] Montross, Piney Point, and Wicomico sheets, on scale of 1:62,500, have been reduced and form parts of Nomini sheet, on scale of 1:125,000.
[4] The west half of Washington sheet shows part of Mount Vernon quadrangle on larger scale.
[5] Natural Bridge special sheet shows part of Natural Bridge quadrangle on larger scale.
[6] Norfolk double sheet includes Norfolk and Virginia Beach sheets.

Digitized by Google

Point Lookout (Md.-Va.).[1]
Princess Anne (Md.-Va.).
Richmond.
Roanoke.
Rockville (Md.-Va.).[2]
Romney (W. Va.-Va.-Md.).
St. Marys (Md.-Va.).[1]
Seneca (Md.-Va.).[2]
Snow Hill (Md.-Va.).
Spotsylvania.
Staunton (Va.-W. Va.).
Tazewell (Va.-W. Va.).
Virginia Beach (Va.- N. C.).[3]
Warfield (W. Va.-Ky.-Va.).
Warrenton.
Washington (Md.-D. C.-Va.), double sheet, 20 cents.[4 5 6]
*West Washington (Md.-D. C.-Va.).[4 5]
Whitesburg (Ky.-Va.).
Wicomico (Md.-Va.).[7]
Williamsburg.[8]
Winchester (Va.-W. Va.).
Woodstock (Va.-W. Va.).
Wytheville (Va.-N. C.).
Yorktown.[8]

PRECISE LEVELING.

Bonsacks, Cahas Mountain, Callaghan, Clarksville, Clifton Forge, Eagle Rock, Martinsville, Natural Bridge, and Rocky Mount quadrangles.

ALLEGHANY, BOTETOURT, FRANKLIN, HENRY, MECKLENBURG, AND ROANOKE COUNTIES.

The following list embodies the Virginia portion of the results of two lines of precise levels. The first line, a spur from Durham, N. C., to Clarksville, Va., was run in 1905 by R. L. Libbey. The second line, from Greensboro, N. C., to Lock No. 6, near Charleston, W. Va., was run in three sections: (1) From Greensboro, N. C., to Buchanan, Va., along the Norfolk & Western Ry., in 1905, by R. L. Libbey; (2) from Buchanan to Moss Run, along the Chesapeake & Ohio Ry., in 1906, by N. A. Campbell; and (3) from Moss Run to Lock No. 6, along the Chesapeake & Ohio and the Kanawha & Michigan railways, in 1907, by C. H. Semper.

The closure error of the second line upon the United States Army Engineer Corps elevation at Lock No. 6, corrected to accord with the 1903 adjustment, was 0.732 foot high; but this error has been removed by adjustment over a total distance of 365 miles.

CLARKSVILLE QUADRANGLE.

[Latitude 36° 30′–36° 45′; longitude 78° 30′–78° 45′.]

From Soudan north to Clarksville.

	Feet.
Soudan, 125 feet west of south switch of siding, in southeast corner of W. L. Averett's yard; iron post stamped "312" (b. m. U)	311.964
Clarksville, 2.5 miles south of, 60 feet west of Southern Ry. tracks, at edge of woods, directly opposite milepost 34; iron post stamped "326" (b. m. V)	325.799

* Out of print.
[1] Point Lookout sheet shows part of St. Marys quadrangle on larger scale.
[2] Rockville and Seneca sheets show parts of Frederick quadrangle on larger scale.
[3] Norfolk double sheet includes Norfolk and Virginia Beach sheets.
[4] The west half of Washington sheet shows part of Mount Vernon quadrangle on larger scale.
[5] Washington sheet shows the same area as East Washington and West Washington sheets.
[6] The east half of Washington sheet, on scale of 1:62,500, has been reduced and forms part of Patuxent sheet, on scale of 1:125,000.
[7] Montross, Piney Point, and Wicomico sheets, on scale of 1:62,500, have been reduced and form parts of Nomini sheet, on scale of 1:125,000.
[8] Shows wooded areas.

Digitized by Google

	Feet.
Clarksville, 25 feet south of lower station, 5 feet above track, in face of rock cut; aluminum tablet stamped "286" (b. m. W)	286.071
Clarksville, on south side of Main Street, between sidewalk and gutter, 125 feet west of tracks; iron post stamped "286" (b. m. X)	285.886
Clarksville, in southeast corner of west abutment pier of Southern Ry. bridge; aluminum tablet stamped "288" (b. m. Y)	287.568

MARTINSVILLE QUADRANGLE.

[Latitude 36° 30′–36° 45′; longitude 79° 45′–80°.]

From Price, N. C., north along Norfolk & Western Ry. to Bassett.[1]

Ridgeway, in front of station; top of rail	840.8
Ridgeway, 175 feet northeast of station; 85 feet east of railroad track, 30 feet east of county road, nearly opposite road-crossing sign; iron post stamped "834"	833.774
Ridgeway, 3.5 miles north of, 200 feet northwest of milepost 54, 600 feet south of mail crane, 50 feet west of railroad track; iron post stamped "720"	719.867
Martinsville, in front of station; top of rail	954.2
Martinsville, 350 feet northwest of station, 300 feet north of railroad track, 10 feet east of College Street, in southwest corner of S. F. Pedigo's yard; iron post stamped "947"	947.268
Martinsville, 2.5 miles northwest of, 60 feet west of Martinsville-Bassett wagon road, 40 feet north of railroad track, 600 feet northwest of milepost 62; iron post stamped "773"	772.742
Martinsville, 5.5 miles north of, 660 feet north of milepost 64, in south abutment of concrete railway culvert 1,870; aluminum tablet stamped "729"	729.360
Bassett, 3.5 miles south of, 200 feet south of milepost 66, in west side of first stone culvert south of milepost 66; square cut	737.061

ROCKY MOUNT QUADRANGLE.

[Latitude 36° 45′–37°; longitude 79° 45′–80°.]

From Bassett along Norfolk & Western Ry. to Rocky Mount.

Bassett, in front of station; top of rail	758.6
Bassett, near southeast corner of yard of Jasper Bassett, outside of front fence, 10 feet west of wagon road, 75 feet southwest of road crossing, nearly opposite Bassett furniture factory; iron post stamped "762"	761.566
Town Creek, 200 feet northeast of Philpotts's store, 200 feet southeast of milepost 73, southeast of railroad; iron post stamped "798"	797.387
Town Creek, 0.25 mile north of, 120 feet northwest of railway crossing, in top of southeast wing wall of railway bridge 1860; aluminum tablet stamped "803"	803.198
Henry, 0.5 mile south of, in top of northwest wing wall of concrete railway bridge 1857; aluminum tablet stamped "882"	882.180
Henry, in front of station; top of rail	891.0
Henry, 0.5 mile north of, near end of first curve north of station, 25 feet west of tracks, 200 feet west of river; iron post stamped "905"	904.681
Henry, 3 miles north of, in northwest wing wall of concrete railway bridge 1849, about 500 feet southwest of milepost 81; aluminum tablet stamped "1089"	1,088.913
Ferrum, 200 feet north of H. E. Menifee's store, 100 feet west of railroad tracks, in vacant lot owned by H. E. Menifee, 2 feet west of fence and roadway; iron post stamped "1296"	1,296.329

[1] For part of this line in North Carolina see Bulletin 434.

Digitized by Google

	Feet.
Ferrum, in front of station; top of rail	1,298.1
Ferrum, 2 miles north of, in first masonry culvert north of station, 300 feet northeast of milepost 86; square cut	1,196.334
Waidsboro, 40 feet west of railway tracks, 10 feet north of public road, opposite south switch signal; iron post stamped "1264"	1,263.865
Saunders siding, 60 feet east of railway track, opposite sign "Water 1 mile," 100 feet northeast of switch, opposite rear of Saunders's store; iron post stamped "1084"	1,084.137
Rocky Mount, midway between the Norfolk & Western and Southern railways, near crossing, 500 feet southwest of milepost 94, 200 feet southwest of Norfolk & Western station; iron post stamped "1146"	1,145.377
Rocky Mount, in front of station; top of rail	1,146.4

CAHAS MOUNTAIN QUADRANGLE.

[Latitude 37°–37° 15′; longitude 79° 45′–80°.]

From Rocky Mount along Norfolk & Western Ry. to point 4 miles south of Roanoke.

Rocky Mount, 1.8 miles east of, in southeast wing wall of concrete railway culvert 1828, about 700 feet northeast of sign "1 mile to station;" aluminum tablet stamped "1106"	1,106.274
Wirtz, 1.5 miles south of, 400 feet north of railroad-crossing sign, 20 feet east of track, in first concrete culvert south of milepost 99; aluminum tablet stamped "1067"	1,066,861
Wirtz, 600 feet south of station, 50 feet east of railway, 90 feet southeast of A. J. McNeil's store, 10 feet south of wagon road; iron post stamped "1128"	1,127.878
Wirtz, in front of station; top of rail	1,121.3
Boones Mills, 3 miles south of, 700 feet northwest of milepost 103, 503 feet southwest of road, in northwest abutment of trestle 1819; aluminum tablet stamped "1131"	1,130.415
Boones Mills, 60 feet northeast of station; 40 feet south of wagon road, opposite store of C. W. Mills & Co.; iron post stamped "1128"	1,127.915
NOTE.—Post was moved S. 48° E. 36.75 feet Nov. 11, 1912; elevation not changed.	
Wright, 1 mile south of, 500 feet north of milepost 111, in west side of stone culvert; aluminum tablet stamped "1171"	1,170.567
Wright, 800 feet south of station, 500 feet south of milepost 110, 20 feet east of track; iron post stamped "1108"	1,107.700
Starkey, 500 feet north of station, in east side of stone culvert, opposite water tank; square cut	1,138.579
Starkey, in front of station; top of rail	1,138.7
Roanoke, 4 miles south of, 600 feet south of milepost 117, east side of stone culvert; aluminum tablet stamped "1086"	1,085.956

BONSACKS QUADRANGLE.

[Latitude 37° 15′–37° 30′; longitude 79° 45′–80°.]

From point 4 miles south of Roanoke along Norfolk & Western Ry. to Lithia.

Roanoke, 1.5 miles south of, in southwest abutment of railway bridge over Roanoke River; aluminum tablet stamped "937"	936.680
Roanoke, in southwest corner of Hotel Roanoke grounds, near Shenandoah Avenue and Jefferson Street gate, 80 feet north of Jefferson Street railroad crossing; iron post stamped "924"	923.329

Digitized by Google

	Feet.
Roanoke, in south abutment of First Street viaduct, 270 feet west of Salem Avenue, facing railroad tracks; aluminum tablet stamped "925"	925.046
Roanoke, in front of station; top of rail	919.7
Hollins, 50 feet east of track, 40 feet southeast of station, near northwest corner of S. V. Nininger's yard; iron post stamped "1169"	1,168.954
Hollins, in front of station; top of rail	1,165.3
Cloverdale, in southwest corner of fenced right of way, back of section tool house, 100 feet northwest of station, 10 feet north of wagon road; iron post stamped "1133"	1,132.435
Troutville, 2 miles south of, 500 feet north of milepost 9, in northwest stone abutment of plate-girder bridge; aluminum tablet stamped "1266"	1,265.411
Troutville, in railroad right of way, opposite and 50 feet west of station, 6 feet west of telegraph pole; iron post stamped "1405"	1,404.598
Troutville, 270 feet north of station, 60 feet north of south switch, in west side of first stone culvert north of station; aluminum tablet stamped "1414"	1,413.973
Troutville, in front of station; top of rail	1,407.7
Nace, 100 feet west of station, on railroad right of way, 75 feet southwest of road crossing, 20 feet south of wagon road; iron post stamped "1356"	1,356.034
Nace, 2 miles north of, in southwest wing wall of iron railway bridge 411 over Back Creek; aluminum tablet stamped "1170"	1,169.900
Lithia, in front of station; top of rail	982.0
Lithia, 90 feet west of railway tracks, opposite station, 10 feet south of east of J. W. Shirley's store, near fence corner; iron post stamped "978"	978.058

NATURAL BRIDGE QUADRANGLE.

[Latitude 37° 30′–37° 45′; longitude 79° 30′–79° 45′.]

From point 3 miles south of Buchanan north along Norfolk & Western Ry. to Buchanan, thence northwest along Chesapeake & Ohio Ry. to Saltpetre Cave.

Buchanan, 3 miles south of, 1,000 feet north of milepost 22, near cattleguard, in east side of stone culvert; aluminum tablet stamped "876"	875.355
Buchanan, in front of Norfolk & Western Ry. station; top of rail	883.3
Buchanan, on High Street, near southeast corner of Presbyterian Church; iron post stamped "862"	861.394
Buchanan, in northwest abutment of wagon bridge near Chesapeake & Ohio Ry. passenger station; aluminum tablet stamped "832"	831.854
Buchanan, in front of Chesapeake & Ohio Ry. station; top of rail	829.8
Buchanan, 3.5 miles west of, at telegraph station; top of rail	849.2
Springwood, on northwest abutment of wagon bridge over James River; aluminum tablet stamped "856"	855.628
Springwood, in front of station; top of rail	851.8
Springwood, 2.3 miles west of, northwest abutment of railroad bridge; aluminum tablet stamped "887"	887.550
Saltpetre Cave, in front of station; top of rail	895.8
Saltpetre Cave, in southeast corner of east abutment at south side of railroad trestle over stream, 100 feet west of station; aluminum tablet stamped "895"	894.888

Digitized by Google

EAGLE ROCK QUADRANGLE.

[Latitude 37° 30′–37° 45′; longitude 79° 45′–80°.]

From Springwood along Chesapeake & Ohio Ry. to Glen Wilton.

	Feet.
Burketons, in front of telegraph station; top of rail	900.6
Salisbury, in front of station; top of rail	915.4
Salisbury, on northeast abutment of railroad bridge; aluminum tablet stamped "913"	912.569
Eagle Rock, in front of station; top of rail	932.0
Eagle Rock, 0.2 mile west of, on northwest abutment of wagon bridge; aluminum tablet stamped "934"	934.550
Eagle Rock, 0.6 mile west of, road crossing; top of rail	936.1
Eagle Rock, 1.8 miles west of, road crossing; top of rail	939.0
Gala, northwest abutment of railroad bridge; aluminum tablet stamped "954"	954.414
Gala, in front of station; top of rail	955.6
Gala, 1.9 miles west of, on east side of track, 60 feet southeast of switch; iron post stamped "956"	955.872
Haden, in front of station; top of rail	962.3
Haden, 1.4 miles west of, southeast abutment of railroad bridge; aluminum tablet stamped "986"	985.930
Baldwin, in front of station; top of rail	987.1
Baldwin, 0.5 mile west of; road crossing	983.6
Baldwin, 2.2 miles west of, road crossing; top of rail	991.6
Glen Wilton, in front of station; top of rail	999.4
Glen Wilton, 70 feet from northwest end of station, west of private road, 4 feet from fence corner; iron post stamped "997"	996.251

CLIFTON FORGE QUADRANGLE.

[Latitude 37° 45′–38°; longitude 79° 45′–80°.]

From Lick Run along Chesapeake & Ohio Ry. to Covington.

Lick Run, in front of station; top of rail	1,003.8
Lick Run, 0.6 mile west of, rock cut; aluminum tablet stamped "1017"	1,016.584
Lick Run, 1.1 miles west of, road crossing; top of rail	1,026.3
Lick Run, 1.5 miles west of, Alleghany-Botetourt county line; top of rail	1,025.54
Iron Gate, in front of station; top of rail	1,028.7
Iron Gate, 0.3 mile west of, road crossing; top of rail	1,030.9
Clifton Forge, on railroad bridge abutment, east of station; aluminum tablet stamped "1064"	1,063.419
Clifton Forge, in front of station; top of rail	1,065.7
Clifton Forge, 3.3 miles west of, road crossing; top of rail	1,127.2
Clifton Forge, 3.3 miles west of, culvert; aluminum tablet stamped "1127"	1,126.680
Lowmoor, in front of station; top of rail	1,145.8
Lowmoor, 2.9 miles west of, south of track, in rock ledge; aluminum tablet stamped "1198"	1,197.163
Lowmoor, 5.1 miles west of, in east abutment of railroad bridge over river; aluminum tablet stamped "1198"	1,197.547
Mallow, in front of station; top of rail	1,216.2
Mallow, 2.1 miles west of, road crossing; top of rail	1,263.6
Mallow, 3 miles west of, road crossing; top of rail	1,246.5
Covington, in front of station; top of rail	1,252.5
Covington, 0.4 mile west of; road crossing	1,255.2
Covington, 0.6 mile west of, in abutment of iron railroad bridge over river; aluminum tablet stamped "1255"	1,255.074

Digitized by Google

CALLAGHAN QUADRANGLE.

[Latitude 37° 45′–38°; longitude 80°–80° 15′.]

From Covington along Chesapeake & Ohio Ry. to Alleghany.[1]

	Feet.
Covington, 2.8 miles west of, on northwest abutment of railroad bridge over river; aluminum tablet stamped "1304"	1,303.896
Covington, 4.8 miles west of, in bridge abutment; aluminum tablet stamped "1379"	1,378.768
Callaghan, in front of station; top of rail	1,425.9
Moss Run, in front of station; top of rail	1,575.2
Moss Run, 0.9 mile west of, 396 feet west of milepost "Ft. M 299," south side of track, in face of wall in rock cut; aluminum tablet stamped "1599"	1,598.815
Backbone, in front of station; top of rail	1,729.6
Backbone, 380 feet west of, southeast foundation stone of water tank, north side of track; aluminum tablet stamped "1733"	1,733.079
Jerrys Run, in face of rock at rear of east end of station; aluminum tablet stamped "1910"	1,909.246
Jerrys Run, in front of station; top of rail	1,906.1
East Alleghany, in front of station; top of rail	2,039.7
Alleghany, 350 feet east of station, north face of east abutment of bridge under track; aluminum tablet stamped "2049"	2,047.420
Alleghany, in front of station; top of rail	2,070.6

Bramwell and Peterstown quadrangles.

GILES AND TAZEWELL COUNTIES.

The following is the Virginia portion of the unadjusted results of a line of precise levels run from Hinton, W. Va., south along highway to Glenlyn, Va., thence west along Norfolk & Western Ry. to Graham, Va., based upon an elevation at Hinton, determined by precise leveling adjusted to agree with the 1912 adjustment. The leveling was done by two parties joining at a point 2 miles west of Oakvale. Yard rods and prism levels were used and the latest method was followed. The total length of double line is 57.8 miles and the total divergence was plus 0.155 foot. For elevations in the West Virginia portion of these quadrangles see Bulletin 477.

The leveling was done in 1909 in Peterstown quadrangle by C. H. Semper and in Bramwell quadrangle by T. A. Green.

PETERSTOWN QUADRANGLE.

[Latitude 37° 15′–37° 30′; longitude 80° 45′–81°.]

At Glenlyn.

	Feet.
Glenlyn, opposite station, on east-bound track; top of rail	1,532.1
Glenlyn, 528 feet west of, on south side of Norfolk & Western Ry., 8 feet south of track, in top of railroad culvert; aluminum tablet stamped "1535"	1,535.109

BRAMWELL QUADRANGLE.

[Latitude 37° 15′–37° 30′; longitude 81° 15′–81° 30′.]

At Graham.

Graham, west side of front entrance to Bank of Graham, in third step above pavement; aluminum tablet stamped "2389"	2,389.450

[1] For continuation of this line in West Virginia see Bulletin 399.

Digitized by Google

PRIMARY LEVELING.

Hallwood and Snow Hill quadrangles.

ACCOMAC COUNTY.

The elevations in the following list, based on tidal observations made by the Coast and Geodetic Survey at Franklin City, form part of a net of levels carried from Baltimore. (See Maryland list, Bulletin 563.) The leveling was done in 1900 by J. W. Hodges.

HALLWOOD QUADRANGLE.

[Latitude 37° 30′–37° 45′; longitude 75° 30′–75° 45′.]

From Pocomoke City south to Massey.

	Feet.
Massey, at New Church station of the New York, Philadelphia, & Norfolk R. R.; iron post stamped "24 Balto"	23.751

NOTE.—Upper part of post was broken off accidentally in 1909.

SNOW HILL QUADRANGLE.

[Latitude 38°–38° 15′; longitude 75° 15′–75° 30′.]

At Franklin City.

Franklin City, in front of post-office building, in foundation wall; bronze tablet stamped "4 Balti"	3.415

Hampton, Isle of Wight, Surry, Toano, Williamsburg, and Yorktown quadrangles.

GLOUCESTER, ISLE OF WIGHT, JAMES CITY, SURRY, WARWICK, AND YORK COUNTIES.

The elevations in the following list are based on the latest adjusted heights along the Coast and Geodetic Survey precise-level line from Newport News. In crossing the James and York rivers, synchronous gage records were made for rising and falling tides.

The leveling in Toano, Williamsburg, Yorktown, and Surry quadrangles was done in 1904 by T. A. Green; in Hampton quadrangle in 1906 by R. S. Deemer.

TOANO QUADRANGLE.

[Latitude 37° 15′–37° 30′; longitude 76° 45′–77°.]

At Croaker.

	Feet.
Croaker, 25 feet east of road forks, directly south of post office and store kept by K. K. Tyssen; iron post stamped "107 Adj 1903"	107.360

WILLIAMSBURG QUADRANGLE.

[Latitude 37° 15′–37° 30′; longitude 76° 30′–76° 45′.]

From Williamsburg north along highway to Croaker, thence northeast, crossing York River to Signpine, thence southeast via Sassafras to Gloucester, thence south to Gloucester Point.

Williamsburg, in east side of post office, in fourth brick from northeast corner; aluminum tablet stamped "84 Adj 1903"	84.524
Williamsburg, 4.8 miles north of, at main road forks 1.3 miles west of Magruder post office, just south of road forks, on east side of road, at edge of Mr. Crest's farm; iron post stamped "82 Adj 1903"	81.969

Digitized by Google

	Feet.
Oaktree, 2.1 miles northwest of, junction with main road, 1.4 miles northeast of Lightfoot, east side of road, just south of forks, on edge of William Maboul's farm; iron post stamped "115 Adj 1903"	115.034
Croaker, 3.6 miles northeast of, south of York River, 0.2 mile north of mouth of Taskinas Creek, on ground of the Wilburg H. Davis estate, post is planted near southeast corner of kitchen of residence, on south side; iron post stamped "39 Adj 1903"	38.602
West End, north of York River, west of road, 300 feet west of small creek, on Captain Coleman's estate, 75 feet south of house occupied by Moses Roe; iron post stamped "3 Adj 1903"	3.431
Signpine, 1.1 miles south of crossroads, west of oak tree standing in road; iron post stamped "92 Adj 1903"	92.272
Sassafras post office, at southwest corner of crossroads, at northeast corner on north side B. C. Newcomb's store; iron post stamped "97 Adj 1903".	97.174
Gloucester, in fifth brick from northwest corner at west side of building owned and occupied by L. E. Mumford Banking Co., in tenth course of bricks above ground; aluminum tablet stamped "76 Adj 1903 "	76.155
Whitemarsh post office, west of road, at junction with road running west, just north of forks, in southeast corner of J. R. Newcomb's store; iron post stamped "55 Adj 1903"	54.966
Ordinary post office, 1 mile south of west of road, near southeast corner of W. H. Hoggs's store; iron post stamped "39 Adj 1904"	39.586

YORKTOWN QUADRANGLE.

[Latitude 37°–37° 15′; longitude 76° 30′–76° 45′.]

From Gloucester Point across York River to Yorktown, thence southeast to Lee Hall.

Gloucester Point post office, at south side, near southwest corner of store kept by J. A. Taliaferro; iron post stamped "5 Adj 1903"	4.881
Yorktown post office, 300 feet west of boat wharf, west of road, at corner of lot owned by R. W. Shields; iron post stamped "6 Adj 1903"	6.442
Halsteads Point, 1.1 miles south of, east side of Lebanon Church, in third brick from northeast corner, in tenth course of bricks above ground; aluminum tablet stamped "82 Adj 1903"	81.845

From Williamsburg southeast along Chesapeake & Ohio Ry. to Denbigh.

Grove, on south side of post office, near southeast corner; iron post stamped "89 Adj 1903"	89.157
Lee Hall, 1.9 miles southeast of, pumping station at reservoir, on east side of pump house, in south end of large stone forming doorsill of front entrance; aluminum tablet stamped "25 Adj 1903"	25.281
Denbigh, in fifth brick from northeast corner (east side) of brick courthouse, in tenth course of bricks above ground; aluminum tablet stamped "36 Adj 1903"	36.193

From Springfield northwest via Septa and Bacons Castle[1] to Highgate.

Septa, just southeast of road forks, on west side near south corner of post office and store kept by J. H. Edward; iron post stamped "86 Adj 1903"	86.852
Septa, 3 miles northwest of, just south of Moonlight crossroads, west of road, on lot owned by W. L. Ward; iron post stamped "84 Adj 1903"	85.044
Septa, 5.3 miles northwest of, at junction with second-class road east, just south of forks, at northwest corner of lot owned by J. G. Goodrich, 25 feet southeast of Ferguson Grove Baptist Church; iron post stamped "92 Adj 1903"	92.386

[1] An error of 1 foot between Battery Park and Scotland was adjusted arbitrarily by placing it south of Bacons Castle.

Digitized by Google

	Feet.
Bacons Castle, just south of crossroads, on east side of road, near southwest corner of store and post office; iron post stamped "84 Adj 1903"	83.407
Highgate, at store and post office at main forks of road; iron post stamped "75 Adj 1903"	74.194

ISLE OF WIGHT QUADRANGLE.

[Latitude 36° 45′–37°; longitude 76° 30′–76° 45′.]

From Newport News west across James River to Battery Park, thence west to Springfield.

Battery Park, 25 feet south of boat wharf, at northwest corner (north side) of J. G. Wilson's store; iron post stamped "5 Adj 1903"	5.776
Smithfield, in west side (second brick from north side) of store owned by T. J. Cox, in seventeenth course of bricks above ground; bronze tablet stamped "Prim. Trav. Sta. No. 209 A, 12"	13.064

SURRY QUADRANGLE.

[Latitude 37°–37° 15′; longitude 76° 45′–77°.]

From Highgate northwest to Scotland, thence across James River to Jamestown, thence northeast to Williamsburg.

Highgate, 2.2 miles northwest of, north of road just east of main forks, at southeast corner of store; iron post stamped "74 Adj 1903"	73.729
Scotland, at southeast corner east side of store kept by Mrs. W. E. Adams; iron post stamped "7 Adj 1903"	6.811
Jamestown, on land owned by the Association for the Preservation of Virginia Antiquities, at northwest corner of barn, on old church grounds; iron post stamped "9 Adj 1903"	8.156

HAMPTON QUADRANGLE.

[Latitude 37°–37° 15′; longitude 76° 15′–76° 30′.]

From Yorktown southeast to point near North Newport News (mean of direct and reverse lines).

Yorktown, 3.1 miles southeast of, on Hampton-Yorktown road, at northwest corner of road southwest, 0.8 mile northwest of Harris Grove; iron post stamped "65"	64.418
Grafton, 0.4 mile northeast of, south of Hampton-Yorktown road, 300 feet north of wood line; iron post stamped "56"	55.573
Kings Corners, 0.4 mile northeast of, 0.2 mile southwest of Zion Church (colored); iron post stamped "36"	35.961
Moores Place, 0.1 mile southwest of, 0.4 mile east of negro Bethel Church, east of Hampton-Yorktown road; iron post stamped "31"	30.786
Little Bethel Church, on Yorktown-Hampton road, 5.5 miles northeast of Hampton; iron post stamped "20"	19.96

From point near North Newport News to Newport News.

Newport News, 3.99 miles north of, road crossing on Chesapeake & Ohio Ry., southwest corner of; iron post stamped "30" [1]	29.441

From point 6 miles north of Newport News southeast via Hampton to Old Point Comfort.

Hampton, 2 miles west of, on Hampton-Yorktown road, center of triangle (Newmarket Corners); iron post stamped "11" [2]	11.347

[1] Not adjusted; closure on Coast and Geodetic Survey bench mark −0.496 foot.
[2] Not adjusted; closure on Coast and Geodetic Survey bench mark −0.501 foot.

Digitized by Google

Fairfax, Haymarket, Indian Head, Seneca, and Washington quadrangles.

FAIRFAX, LOUDOUN, AND PRINCE WILLIAM COUNTIES.

The elevations in the following list were determined by primary leveling and accord with Bulletin 434, being unchanged by the 1912 adjustment.

The leveling was done in 1911 in Fairfax, Haymarket, Seneca, and Washington quadrangles by E. E. Witherspoon, and in Indian Head quadrangle by J. B. Metcalfe. Additional leveling was done in the Washington quadrangle in 1912 by F. J. McMaugh and D. H. Baldwin. All of these levelmen used wye levels except Baldwin, who used a prism level. Part of the leveling in Seneca quadrangle was done in 1906 by R. A. Farmer.

FAIRFAX QUADRANGLE.

[Latitude 38° 45′–39°; longitude 77° 15′–77° 30′.]

From Forestville south along highways to point near Andrew Chapel.

	Feet.
Forestville, near southeast corner of east foundation of Oliver's store; tablet stamped "344 Va"	344.405
Forestville, 1 mile south of, on east end of south abutment of bridge over Cabin Hickory Run, at bend of road to west; chiseled square marked "240"	236.91
Forestville, 2 miles south of, on east side of Alexandria turnpike, at junction of road to Forestville; chiseled square on rock marked "312"	309.28
Forestville, 3.1 miles south of, 300 feet east of road to south, 10 feet south of road, 60 feet north of house; copper nail in root of 15-inch cedar tree marked "268.4"	265.47
Kenmore, 0.2 mile east of, 100 feet east of public road south, 10 feet north of road; copper nail in root of 18-inch cherry tree marked "347.7"	344.80
Andrew Chapel, 0.6 mile east of, 10 feet north of road at fork; iron post stamped "366"	365.527

From point near Ilda west and north along public road to Sterling.

Ilda, 1.3 miles west of, 200 feet east of road north, 20 feet south of turnpike, south of fence; nail in root of 4-inch cedar tree marked "386"	383.29
Ilda, 2.2 miles west of, 300 feet west of road south, west of bridge, 12 feet north of turnpike, in front of house; nail in root of 24-inch locust tree marked "413"	410.34
Fairfax Courthouse, on west edge of top of steps leading to courthouse; tablet stamped "447"	446.776
Fairfax Courthouse, opposite courthouse, in front of cobbler shop under Fairfax Hotel, near edge of porch; chiseled square on west edge of cement pavement	438.36
Fairfax Courthouse, 1.1 miles west of, 20 feet north of turnpike at junction of turnpikes, in root of 7-inch cedar tree; copper nail marked "424.8"	421.96
Fairfax Courthouse, 2.8 miles west of, 20 feet south of turnpike, north of house; copper nail in root of large sycamore tree marked "410"	406.74
Fairfax Courthouse, 3.5 miles west of, 150 feet east of crossroads, 30 feet south of road, in front of church; iron post stamped "Prim. Trav. Sta. No. 6, Va., 478, 1911"	478.167

Digitized by Google

	Feet.
Fairfax Courthouse, 4.6 miles west of, 130 feet west of road leading to north, 230 feet west of top of hill, north of turnpike, at fence corner; copper nail in cedar stump marked "437"	434. 34
Fairfax Courthouse, 6 miles west of, 30 feet south of turnpike, 15 feet west of road to Centerville; iron post stamped "376"	375. 893
Chantilly, 600 feet west of store, 15 feet north of turnpike, 10 feet east of small stream, 3 feet south of fence; chiseled cross on rock marked "303"	300. 60
Chantilly, 0.6 mile west of school, 300 feet southeast of church, 50 feet south of turnpike; copper nail in 12-inch white-oak stump marked "297"	294. 30
Pleasant Valley, 0.9 mile east of, 0.3 mile east of road to Sterling, 300 feet west of rise, on north side of turnpike; copper nail in 12-inch cedar stump marked "274"	271. 41
Pleasant Valley, 0.6 mile east of, point on rock at junction of Sterling road with turnpike, marked "263"	259. 33
Pleasant Valley, 100 feet west of post office, in front of residence of M. E. Palmer, in concrete walk, under gate; aluminum tablet stamped "250"	249. 877
Pleasant Valley, 1.6 miles north of, 100 feet north of road to east to house, 25 feet north of trail to west, 20 feet west of road; copper nail in root of small tree marked "275"	271. 85
Pleasant Valley, 2.6 miles north of, 15 feet east of road, 100 feet south of road to east; copper nail in root of 12-inch black-oak tree marked "282"	279. 28
Willard, in northeast angle of crossroads; copper nail in root of white-oak tree marked "299.5"	296. 4
Willard, 0.3 mile north of, 40 feet east of road, 30 feet south of public road to east; copper nail in top of 2-foot stump marked "292"	289. 36
Willard, 1.5 miles north of, 100 feet north of school, opposite public road west, 15 feet east of road, north of gate; iron post stamped "276"	276. 469
Sterling, 2.2 miles south of, in southeast angle of junction of roads to Sterling, Pleasant Valley, and Ashburn, 100 feet west of road to Herndon; copper nail in root of 15-inch wild cherry tree painted "268"	264. 80
Sterling, 1.2 miles south of, 150 feet south of private road west, 250 feet south of house, 200 feet south of bend of road east, 10 feet west of road; copper nail in root of 10-inch white-oak tree marked "303"	300. 26

From Pleasant Valley south along public road to point near Bull Run.

Pleasant Valley, 1.2 miles south of, 700 feet south of sharp bend to west, 25 feet south of private road; copper nail in root of 8-inch cedar tree west of road, marked "278"	275. 58
Pleasant Valley, 1.7 miles south of, point on rock in west angle of crossroads, marked "315.1"	312
Pleasant Valley, 2.7 miles south of, 20 feet north of Braddock road, in northwest angle of road; iron post stamped "Prim. Trav. Sta. No. 5, 280 Va."	280. 286
Pleasant Valley, 3.9 miles south of, 1.2 miles south of Braddock road, 550 feet south of private-road crossing near house, in edge of timber, east of road, in bend to east; chiseled square on stone marking land line, marked "250"	246. 87
Pleasant Valley, 5.2 miles south of, 2.5 miles south of Braddock road, west of road near bend to west, opposite home of Mrs. C. V. Gheen, in sandstone bowlder; aluminum tablet stamped "285"	284. 535
Pleasant Valley, 6.3 miles south of, 0.4 mile north of Warrenton turnpike, 175 feet north of small stream east, in open field, 20 feet west of road, 2 feet west of ditch, on rock; chiseled square marked "259"	255. 97
Bull Run, 0.9 mile east of, in southeast angle of crossroads at store; chiseled square on rock, marked "302"	298. 91

Digitized by Google

From point 2.1 miles west of Manassas east along public road to Lee Chapel.

	Feet.
Manassas, 2.1 miles west of, at Rixlew, 35 feet north of Southern Ry. tracks, 20 feet west of road; iron post stamped "Prim. Trav. Sta. No. 4, 237, 1911, Va."	236.790
Manassas, 0.9 mile west of, north of road, 100 feet east of road north to house; copper nail in root of 33-inch black-oak tree, marked "271"	268.39
Manassas, 100 feet southeast of railroad station, in doorstep of office building; aluminum tablet stamped "314"	314.107
Manassas, 1 mile east of, 700 feet east of road crossing, opposite bend in road south, 25 feet north of tracks; chiseled square on red sandstone rock, marked "281"	277.79
Manassas, 3 miles east of, 300 feet east of mouth of small run, north of railroad tracks; chiseled square on rock in cut, marked "185"	182.14
Manassas, 4.3 miles east of, 20 feet south of tracks, 11 feet east of public road, 4 feet north of sign post; iron post stamped "168"	168.276
Clifton, 150 feet west of station, 40 feet north of tracks, 20 feet west of road; copper nail in root of aspen tree, marked "192.4"	189.40
Clifton, 1 mile southeast of, at fork of road to Manassas, south of road; copper nail in root of small white-oak tree, marked "370"	366.92
Clifton, 1.7 miles southeast of, 250 feet northwest of house, in west angle of crossroads; iron post stamped "Prim. Trav. Sta. No. 3, 324, 1911 Va."	324.469
Clifton, 2.8 miles southeast of, in front of house, north of road, 650 feet east of bend to north; copper nail in root of 18-inch black-oak tree, marked "331"	328.06
Clifton, 3.3 miles southeast of; center of Fairfax road at crossroads at store, marked "352"	349
Clifton, 3.8 miles east of, 0.5 mile east of Fairfax road, 220 feet east of small stream, 10 feet north of road; copper nail in 12-inch pine stump, marked "328"	325.32
Clifton, 4.9 miles east of, 20 feet west of road, in front of house, 50 feet south of road east, 35 feet north of road west; iron post stamped "403"	403.043
Sideburn, 1.5 miles south of, in front of Bellaire School, in east angle of crossroads; copper nail in root of black-oak tree, marked "359"	355.98
Lee Chapel, 0.8 mile northwest of, 45 feet south of top of hill, west of road; copper nail in root of small pine tree, marked "402"	399.24
Lee Chapel, 250 feet southwest of, in northwest angle of crossroads; iron post stamped "330"	330.169

From Lee Chapel north to point near Ilda.

Lee Chapel, 1.7 miles north of, 50 feet northwest of crossroads, 300 feet east of white house; copper nail in top of chestnut stump, marked "372.2"	372.14
Burkes station, 0.25 mile west of, 15 feet south of track, 50 feet west of road crossing, 5 feet below level of track, in southeast corner of concrete culvert; aluminum tablet stamped "262"	262.178
Burkes, 0.7 mile north of, in northeast corner of crossroads, just at foot of telephone pole; cross on rock, marked "375.8"	375.71
Burkes station, 1.6 miles north of, in northwest corner of north-south road crossing Braddock Road; copper nail in root of pine tree, marked "371"	370.88
Ilda, 1.2 miles south of, east of road, 150 feet south of private road, inside of fence; copper nail in root of small pine tree, marked "328"	325.33

Digitized by Google

HAYMARKET QUADRANGLE.

[Latitude 38° 45′–39°; longitude 77° 30′–77° 45′.]

From Bull Run south along public road to point 3 miles northwest of Manassas.

	Feet.
Bull Run, in center of south wall of bridge over, on Warrenton turnpike; iron bolt marked "184"	180.68
Stonehouse, 300 feet southwest of, 200 feet south of store at crossroads, in east end of north abutment of bridge over Young's Branch; aluminum tablet stamped "186"	185.716
Stonehouse, 1 mile south of, in front of house of J. H. Rowzie, 100 feet north of gate, east of road; copper nail in root of 6-inch leaning cedar tree, marked "241"	237.73
Stonehouse, 1.5 miles south of, at road leading to Balls Ford; point on rock, marked "229.5"	226.5
Manassas, 4.3 miles northwest of, opposite gate on private road, west of public road in bend to west; copper nail in root of small twin white-oak tree, marked "245"	242.18
Manassas, 3.1 miles northwest of, north of road, opposite road leading to Rixlew, inside of fence near gate; copper nail in root of 10-inch cedar tree, marked "222"	218.88

INDIAN HEAD QUADRANGLE.[1]

[Latitude 38° 30′–38° 45′; longitude 77°–77° 15′.]

From Lee Chapel south along public road to Pohick Creek (double-run line).

Pohick Creek, 3.7 miles northwest of, in southeast corner of crossroads; nail in root of 5-foot white-oak tree, marked "317.2"	317.17
Pohick Creek, 2.6 miles northwest of, 30 feet west of road north to house, 8 feet northeast of road; copper nail in root of 12-inch white-oak tree, marked "270.6"	270.66
Pohick Creek, 1.7 miles northwest of, 6 feet east of road; copper nail in root of red-oak tree, marked "200.6"	200.58
Pohick Creek, in edge of capstone to northwest abutment of old Richmond, Fredericksburg & Potomac R. R. bridge, just east of new bridge over Pohick Creek in southeast corner of abutment; surface of an offset (C. & G. S. b. m.)	63.830

SENECA QUADRANGLE.[1]

[Latitude 39°–39° 15′; longitude 77° 15′–77° 30′.]

From Sterling east along public road to Dranesville.

Sterling, in front of schoolhouse, 30 feet north of road to Dranesville, 0.1 mile east of railroad track, in rock; aluminum tablet stamped "Prim. Trav. Sta. No. 1, 314, 1907"	310.441
Sterling, 1.1 miles east of, 300 feet east of bend in road to south, 15 feet north of road; copper nail in root of 15-inch white-oak tree, marked "321"	317.93
Sterling, 2.1 miles east of, north of road, 150 feet east of small stream running north; copper nail in root of 12-inch white-oak tree, marked "290"	286.68
Sterling, 3.1 miles east of, in northeast angle of crossroads; iron post stamped "241"	237.571

[1] For elevations in Maryland in this quadrangle see Bulletin 563.

Digitized by Google

	Feet.
Dranesville, 0.4 mile west of, north of road, 150 feet northeast of house; copper nail in 10-inch cedar stump, marked "344"	340.76
Dranesville, in front of S. Jenkins's hotel, south edge of road; iron post stamped "322"	321.535
Dranesville, 0.25 mile east of, opposite J. F. Duke's house, south of pike, 12 feet east of 30-inch oak tree at road fork, in 20 by 8 by 8 inch rock; tablet stamped "395 Va"	391.937

From Edwards Ferry southeast to Dranesville.

Mahala, 50 feet north of former post office, north of pike, in big flat rock; tablet stamped "326"	325.981
Daysville, J. T. Palmer's house, in south wall of west chimney; tablet stamped "Va 314"	313.900

WASHINGTON QUADRANGLE.[1]

[Latitude 38° 45′–39°; longitude 76° 45′–77° 15′.]

From point 0.9 mile west of Tyson Crossroads south along public road to Ilda.

Tyson Crossroads, 0.9 mile west of, 25 feet south of road northeast; copper nail in root of 10-inch oak tree, marked "404.7"	401.84
Tyson Crossroads, in northeast angle of, opposite Myers's store; iron post stamped "483"	482.944
Tyson Crossroads, 1.1 miles southeast of, 15 feet north of culvert, 0.4 mile south of Alexandria turnpike, 10 feet east of public road; copper nail in top of 2-foot stump, marked "479"	476.475
Dunn Loring, 1.7 miles south of, at Merrifield, in northwest angle of crossroads; iron post stamped "Prim. Trav. Sta. No. 1, 362, Va"	361.888
Merrifield, 1.4 miles south of, 1,300 feet north of road fork, 100 feet north of small drain, on west side of road; copper nail in root of 12-inch pine tree, marked "338"	334.82
Ilda, 0.9 mile north of, on railroad grade, 10 feet east of road; chiseled square on bowlder, marked "320"	317.54
Ilda, 0.2 mile east of, opposite road leading to Merrifield, on south side of turnpike; iron post stamped "374"	374.054

From Alexandria northwest along Alexandria-Leesburg pike to Falls Church.

Alexandria, near middle of sill of northwest window of customhouse, 0.12 meter from extreme west edge of sill, 0.115 meter from extreme edge of sill; square mark (C. & G. S. b. m. G)	46.740
Alexandria, 200 feet east of Union Station, opposite stairway leading to same, on west side of King Street; top of bolt at foot of steel column of Richmond, Fredericksburg & Potomac R. R. bridge, painted "U. S. B. M. 17"	16.863
Alexandria, 0.94 mile north of customhouse, west end of south curbstone at intersection of Mount Vernon Avenue and King Street; telephone pole painted "U. S. 24"	24.37
Alexandria, 1.4 miles northwest of, east side of road, at foot of southwest brace of standpipe tower; top of bolt, elevation painted on telephone pole near, "U. S. B. M. 140"	139.78
Alexandria, 2.9 miles northwest of, 150 feet northwest of Row's store at northwest corner of crossroads; spike in telegraph pole, painted "U. S. B. M. 193"	192.90

[1] For elevations in Maryland in this quadrangle see Bulletin 563.

Digitized by Google

	Feet.
Alexandria, 4.2 miles northwest of, 250 feet north of small bridge, on west side of road; spike in telegraph pole, painted "U. S. B. M. 133"	133.02
Baileys Crossroads, 30 feet west of center of, on top of concrete culvert wall, west side of road	252.92
Baileys Crossroads, 0.6 mile northwest of, 310 feet southeast of blacksmith shop, 80 feet east of gateway at T lane west; copper nail in sycamore tree, painted "U. S. B. M. 280"	279.45
Falls Church, at northwest corner of Broad and Washington streets, on stone	330.06
Falls Church, in south face at southwest corner of I. O. O. F. building; aluminum tablet stamped "338"	337.420

From Alexandria west along Southern Ry. to Burke station.

Alexandria, opposite west end of waiting room at Union Station; north rail of north track	33.0
Seminary station, 140 feet east of road crossing north of track; spike in telegraph pole, painted "U. S. B. M. 38"	37.59
Cameron Run, 850 feet east of, on top of southwest corner of south abutment of Richmond, Fredericksburg & Potomac R. R. bridge, about 4 feet above track; aluminum tabled stamped "54"	54.570
Cameron Run, south track of bridge over; north rail	54.5
Cameron Run; surface of water July 15, 1912	42.2
Lincolnia, in front of station; top of north rail of north track	98.7
Lincolnia, 110 feet west of road crossing, 20 feet south of track; spike in telephone pole, painted "U. S. B. M. 100"	99.66
Edsalls station, 0.4 mile east of, on bridge over small creek, south side of north track; bolt in 8 by 8 inch timber 1 foot from west end	127.67
Edsalls, opposite station; top of north rail of north track	147.4
Springfield, 510 feet east of station, west abutment of railroad bridge over Back Lick Run, in top stone at south end; aluminum tablet stamped "215"	215.155
Springfield, 130 feet east of road crossing, opposite station; top of south rail of north track	222.1
Springfield, 0.8 mile west of, at second-class crossroads; top of north rail, "250" painted on telephone pole northeast of crossing	250.0
Ravensworth, 1 mile east of, east end of steel and timber trestle about 75 feet high, south side; top of bolt, painted "U. S. B. M. 234"	233.66
Ravensworth, 450 feet east of station, at road crossing; top of north rail of north track	289.6
Ravensworth, 80 feet northeast of station, 45 feet north of track, 10 feet south of road; spike in telegraph pole, painted "U. S. B. M. 289"	289.18
Ravensworth, 0.7 mile west of station, 60 feet northwest of overhead highway bridge, 30 feet north of track; spike in telegraph pole, painted "U. S. B. M. 323"	322.80
Burke, in front of station; top of south rail of north track	275.2
Burke, 0.25 mile west of, 15 feet south of track, 50 feet west of road crossing 5 feet below level of track, in top of southeast corner of concrete culvert; aluminum tablet stamped "262"	262.178

From Alexandria north to East Arlington (leveled twice).

Braddock Heights, 950 feet west of station, at northeast corner of crossroads; top of hydrant	50.30
Braddock, in front of station; top of west rail of west track	33.6
Lloyd, in front of station; top of west rail of west track	39.3
Delray, 20 feet north of station; top of west rail of west track	42.5

Digitized by Google

	Feet.
Mount Ida, in front of station; top of west rail of west track	37.3
St. Asaph, in front of station; top of west rail of east track	31.6
St. Elmo, west abutment of Southern Ry. bridge, in top of north end; aluminum tablet stamped "36"	35.958
Humes Spring, about 500 feet southeast of; copper nail in large oak tree painted "U. S. B. M. 31"	30.82
St. Elmo, at road fork; spike in telegraph pole, painted "U. S. B. M."	46.14
St. Elmo, 0.6 mile west of, at north end of bridge over Four Mile Run, east side; copper nail in 12 by 12 inch timber	29.53
St. Elmo, 1.4 miles north of; top of north end of east wall of culvert	50.28
East Arlington, 0.1 mile south of, at front entrance to Mount Zion Baptist Church, in top of top step, 0.5 foot north of south end, 0.15 foot west of east edge; chiseled square	145.42
East Arlington, 60 feet southwest of Hyman's store; chisel mark on top of lone stone	107.77

From Long Bridge west to East Arlington, thence north to Rosslyn.

Long Bridge, west end of south abutment of new bridge, chiseled square (Pennsylvania R. R. b. m. 143a)	20.56
Clark station on Falls Church Electric Ry.; top of north rail	96.5
Clark station, 0.3 mile north of, 100 feet north of iron gate in Arlington National Cemetery wall, west side of road; spike in west side of telegraph pole, painted "U. S. B. M. 65"	65.31
Clark station, 1.1 miles north of, 100 feet north of Arlington station, opposite "Sheridan Gate"; east rail of electric railway	50.17
Rosslyn, in west face top of south end of stone doorsill of Arlington National Bank, 0.3 foot east of west edge and 0.5 foot north of south edge; chiseled square	60.095

From Chain Bridge northwest along Leesburg-Georgetown pike to Langley, thence southwest to point 1.1 miles south of Tyson Crossroads.

Chain Bridge, 15 feet southwest of southeast corner of lower half of west abutment; chiseled square	5.17
Chain Bridge, north end of west abutment, top of parapet wall, level with bridge floor, 12 inches southwest of northeast corner, 3.43 feet higher than iron pin in foundation masonry, 4 feet north of bridge seat and on first course below bridge seat; aluminum tablet stamped "46"	45.922
Chain Bridge, 1.4 miles northwest of, at southwest corner of T road south at blacksmith shop, in north root, blazed maple corner tree; copper nail	229.54
Chain Bridge, 1.6 miles northwest of, north side of road, in southwest root of 4-foot lone maple tree; iron nail	235.53
Chain Bridge, 2.2 miles northwest of, 60 feet west of center of Leighter's entrance drive; copper nail in root of 12-inch cedar tree	266.54
Joseph Leiter's residence, in foundation near northwest corner, 6 feet above ground; bronze tablet stamped "164.8 1912" [1]	164.811
Langley, south face at southeast corner stone of foundation of Town Hall; aluminum tablet stamped "275"	274.503
McLean, 130 feet northeast of Washington & Old Dominion Electric Ry. crossing, in north gutter of road, in south side of leaning cherry tree; copper nail	284.77

[1] Set by L. F. Biggs, 1912.

Digitized by Google

	Feet.
McLean, in front of Washington & Old Dominion Electric Ry. station; top of rail	287.1
Lewinsville, 30 feet east of northeast corner of crossroads; copper nail in root of large aspen tree	368.56
Lewinsville, in front stone foundation wall of porch of store of Anderson Mankin; aluminum tablet (set vertically) stamped "366"	365.713
Lewinsville, 0.3 mile south of, at T road west, southeast corner of private road east, on top of stone bracing corner fence post; chiseled square	332.50
Lewinsville, 1 mile southwest of, at summit of road; top of gate rest	409.1
Lewinsville, 1.6 miles southwest of, 0.4 mile east of Alexandria-Leesburg pike, south side of road, southwest of Lorin Magarty's house north of road, in trunk of persimmon tree just east of small wash; copper nail	375.84
Tyson Crossroads, 0.9 mile southeast of, along Alexandria-Leesburg pike, at north corner of T road northeast; top of painted upper staple cemented in 6-foot masonry fence post 3 feet in diameter (fence not yet built)	450.31
Tyson Crossroads, 1.1 miles southeast of, 15 feet north of culvert, 0.4 mile south of Alexandria-Leesburg pike, 10 feet east of public road; copper nail in 2-foot stump, marked "479"	476.475

From point 0.9 mile southeast of Tyson Crossroads southeast along Alexandria-Leesburg pike to Falls Church, thence east along road through Cherrydale to Rosslyn.

West Falls Church, 1.6 miles northwest of, on east side of road, opposite house of James F. Nelson; copper nail in root of 20-inch sycamore tree	429.36
West Falls Church, 0.6 mile northwest of, at south side of entrance drive to large house, 500 feet west of pike; copper nail in 32-inch locust tree	398.72
West Falls Church, 0.3 mile northwest of, on pike at secondary crossroad, at top of round wooden post 3 feet high, the bottom level with road intersection; copper nail	382.88
West Falls Church, in front of post office; top of rail of Washington & Virginia Electric Ry	340.0
West Falls Church, in front of Southern Ry. station; top of rail	339.3
West Falls Church, north corner of West and Broad streets, in stone embedded in root of maple tree; chiseled square	336.22
West Falls Church, 0.5 mile southeast of, on Broad Street, on center of top of east end wall of concrete culvert; chiseled square painted "312"	311.90
Falls Church, southeast face of south corner of church, top foundation stone 4 feet above ground; aluminum tablet stamped "338"	337.420
Falls Church, north corner of Broad and Washington streets; top of corner stone post	330.06
East Falls Church, southwest of crossing, on center of top of north end wall of concrete culvert; chiseled square	291.02
Falls Church, in front of Southern Ry. station; top of rail	301.2
Falls Church, 1.2 miles northeast of station, at crossroads, 67.4 feet northwest of north corner stone and 0.625 foot lower than its highest point; copper nail in root of 3-foot chestnut tree	374.63
Highview Park; doorsill of Kelvey Methodist Church (colored)	405.02
Highview Park, north face at northwest corner of schoolhouse, in center of top course of foundation brick; chiseled cross painted "415 U. S. B. M."	414.93
Highview Park, at northeast corner of crossroads, in top of stump of telephone pole behind a used telephone pole and level with road intersection; copper nail	403.48
Livingstone Heights, in front of Washington & Old Dominion Electric Ry. station; top of rail	402.6
Cherrydale Heights, at junction of street to south at curve; northwest corner of concrete flagstone under pump (not marked)	364.44

Digitized by Google

	Feet.
Cherrydale, 250 feet west of Washington & Old Dominion Electric Ry. station south side of road, in root on south side of 2-foot oak tree; copper nail	305.40
Cherrydale, in front of Washington & Old Dominion Electric Ry. station; top of rail	286.2
Dominion Heights, in front concrete-faced wall of schoolhouse, 1 foot west of northeast corner, 2.4 feet above ground; aluminum tablet stamped "267"	267.062
Dominion Heights, in front of Washington & Old Dominion Electric Ry. station; top of rail	257.9
Rosslyn, 1.8 miles west of, west side of Bluemont Division of Washington & Old Dominion Electric Ry. bridge over highway, south side of highway, on center of concrete end wall of iron culvert; chiseled square painted "190"	189.92
Rosslyn, 1.2 miles west of, 84 feet east of road fork to south, in trunk of leaning cherry tree; copper nail, tree painted "B. M. 223"	222.69
Rosslyn, 1 mile west of, at southeast corner of crossroads, on corner stone post 0.8 foot lower than ground at intersection (not marked)	222.37
Rosslyn, 0.7 mile west of, at iron tank watering trough, on west end of south concrete end wall of iron culvert under electric railway; chiseled square painted "152"	151.97
Rosslyn, Arlington National Bank, in west face at northeast corner, in sandstone water table; aluminum tablet stamped "62"	61.971
Rosslyn, Arlington National Bank, on south end of west doorsill; chiseled square	60.095

Boydton, Brookneal, Cahas Mountain, Callands, Chatham, Clarksville, Clover, Lynchburg, Moneta, Nathalie, and Virgilina quadrangles.

CAMPBELL, CHARLOTTE, HALIFAX, MECKLENBURG, AND PITTSYLVANIA COUNTIES.

The elevations in the following list result mainly from a line of levels run in 1905 by A. H. Horton, of the Water-Resources branch of the Survey from a bench mark at Clarksville established by the precise-level party of R. L. Libbey. The line follows Roanoke River (approximately) from Clarksville to Hurt; thence the railroad via Elba to Rocky Mount, where it is connected with a bench mark also established by Libbey. A spur line extends 14 miles down Roanoke River from Clarksville, and another line extends from Toshes to Deerwood Ford.

Additional work was done in 1908 by E. O. Halbert, in cooperation with the State, in Clarksville, Clover, Nathalie, and Virgilina quadrangles, based on bench marks at Clarksville, Randolph, and Clarkton.

CLARKSVILLE QUADRANGLE.[1]

[Latitude 36° 30′–36° 45′; longitude 78° 30′–78° 45′.]

From Clarksville northwest along Roanoke River to Bailey's plantation.

	Feet.
Bluestone Creek, at mouth of, 250 feet north of Roanoke River, 120 feet east of Skipwith's (deserted) mill, top of low embankment; iron post stamped "284 Adj 1903"	283.550

[1] For precise-level elevations in Clarksville quadrangle see pp. 8–9.

Digitized by Google

	Feet.
Abbyville, 1 mile below, in pasture lot of William Russell, 400 feet from river, in top of granite bowlder; aluminum tablet stamped "290 Adj 1903"	289.683
Abbyville, 2 miles above, on left bank of Roanoke River, at foot of bluff on McLean's plantation, 100 feet north of an old mill, set vertically in a granite ledge; aluminum tablet stamped "296 Adj 1903"	296.192
Abbyville, 5 miles above, on left bank of river, 1,300 feet below mouth of Difficult Creek, which is on right bank of river, set vertically in a rock ledge on Bailey's plantation; aluminum tablet stamped "312 Adj 1903".	311.639

From Clarksville west along Southern Ry. to point 2 miles west of Nelson.

Clarksville, in southeast corner of west abutment pier at Southern Ry. bridge; aluminum tablet stamped "288"	287.568
Clarksville Junction, in front of station; top of rail	287.8
Clarksville Junction, 200 feet west of, at railroad bridge; top of rail	292.6
South Clarksville, in front of station; top of rail	357.7
South Clarksville, 1.2 miles west of, east end of small cut, sandstone bowlder 15 feet north of track; top marked "G. S. □ 376 B. M."	376.20
South Clarksville, 2.2 miles west of, 300 feet north of track, in south face of chimney of George Day's 1½-story log house, 18 inches above ground; aluminum tablet stamped "420"	419.574
South Clarksville, 3 miles west of, 50 feet north of track, at west end of fill, inside of fence, in base of white-oak tree; spike	338.80
South Clarksville, 3.4 miles west of, 50 feet north of track, on public road, in root of large white-oak tree; railroad spike	436.99
Buffalo Junction, in front of station; top of rail	429.8
Buffalo Junction, 1.1 miles west of, 120 feet south of railroad track south of public road, in foot of oak tree; spike	468.04
Buffalo Junction, 2 miles west of, 200 feet south of railroad, in north face of chimney of H. T. Arrington's 1½-story house, 18 inches above ground; aluminum tablet stamped "471"	470.518
Buffalo Junction, 4.8 miles west of, brick railroad culvert, in top of south head wall; aluminum tablet stamped "423"	423.408
Nelson, in front of station; top of rail	429.9

CLOVER QUADRANGLE.

[Latitude 36° 45′–37°; longitude 78° 30′–78° 45′.]

From Difficult Creek northwest along Roanoke River to Clarks Ferry.

Lacks Ferry, 2 miles below, right bank of Roanoke River, 125 feet south of large double gum tree and large double white-oak tree, 250 feet from edge of river, 1 foot above line between properties of Alexander M. Coleman and Charles Wadkins; iron post stamped "315 Adj 1903"	315.265
Lacks Ferry, 1,100 feet above, on left bank of river, 50 feet from edge of river, in rock ledge; aluminum tablet stamped "323 Adj 1903"	322.733
Beatrice, about 100 feet fron former post office; iron post stamped "479 Adj 1903"	479.368
Beatrice, 3.4 miles northwest of, road forks at Black Castle schoolhouse; iron post stamped "489 Adj 1903"	489.150
Randolph, in left abutment downstream side of Southern Ry. bridge across Roanoke River; copper bolt in cement in capstone, stamped "341 Adj 1903"	340.657
Clarks Ferry, 0.8 mile north of, in west side, near southwest corner of foundation of T. C. Watkin's house; aluminum tablet stamped "453 Adj 1903"	452.562

Digitized by Google

From Randolph southwest along Southern Ry. to point 1 mile southwest of Clover.

	Feet.
Randolph, in left abutment downstream side of railroad bridge across Roanoke River; copper bolt in capstone, stamped "341"	340.657
Randolph, railroad bridge over Roanoke River; top of rail	346.1
Roanoke River; surface of water under bridge Sept. 30, 1908	306
Clover, in front of station; top of rail	491.8
Clover, in face of division wall between Bank of Clover and post office, on west side of Main Street; aluminum tablet stamped "506"	505.789

NATHALIE QUADRANGLE.

[Latitude 36° 45′-37°; longitude 78° 45′-79°.]

From point near Watkins northwest along Roanoke River to Clarkton.

Watkins, 0.33 mile west of post office, in southwest corner of four corners; iron post stamped "490 Adj 1903"	490.106
Watkins, 1.2 miles west of, north of road, 100 feet northeast of I. C. Scott's mail box; corner of a stone post 1 foot above ground	461.74
Noland, north of road, 85 feet east of post office and store; iron post stamped "503 Adj 1903"	503.070
Coles Ferry, on hill south of, opposite Mr. Stearn's house, on right bank, in large bowlder embedded in ground; aluminum tablet stamped "401 Adj 1903"	401.429
Coles Ferry, 3 miles above, on north side of river road, on Bruce's estate near H. C. Gilliland's house; iron post stamped "368 Adj 1903"	367.973
Clarkton, in grass plot between Clark's store and station; iron post stamped "393 Adj 1903"	[1] 386.434

From Houston north along Norfolk & Western Ry. to Clarkton.

Neathery, in front of station; top of rail	495.0
Neathery, 0.2 mile north of, 10 feet west of track, in top of west head wall of small stone railway culvert; aluminum tablet stamped "482"	481.977
Neathery, 3.3 miles north of, 10 feet east of track, in top of east head wall of small stone railway culvert; aluminum tablet stamped "534"	533.801
Crystal Hill, in front of station; top of rail	564.3
Crystal Hill, 1.9 miles north of, 200 feet south of road crossing, 10 feet west of track, in top of west head wall at small railway culvert; aluminum tablet stamped "567"	566.731
Lennig, in front of station; top of rail	576.7
Lennig, 2.3 miles north of, 20 feet west of track, in top of west head wall of small railway culvert; aluminum tablet stamped "531"	530.543
Nathalie, in front of station; top of rail	524.5
Nathalie, 1.8 miles north of, top of west head wall of small railway culvert; aluminum tablet stamped "432"	431.738

From Scottsburg northeast along Southern Ry. to point near Clover.

Clover, 5 miles south of, 2,100 feet north of overhead bridge, top of west head wall of stone railway culvert; aluminum tablet stamped "375"	374.513
Clover, 2.7 miles south of, top of east catch wall of south abutment of railway bridge; aluminum tablet stamped "363"	362.656

[1] The elevation given is corrected for a mistake of 6.814 feet found October, 1908.

Digitized by Google

LYNCHBURG 30′ QUADRANGLE (embracing Gladys and Leesville 15′ quadrangles).

[Latitude 37°–37° 30′; longitude 79°–79° 30′.]

From Perth west along Roanoke River to Hurt.

	Feet.
McKeever Ferry, about 0.3 mile east of road forks, 75 feet south of T. L. Rudder's house, in a 3-foot turkey-oak tree; aluminum tablet stamped "545 Adj 1903"	545.008
Green Hill, at road forks to ferry; iron post stamped "510 Adj 1903"	509.961
Cedar Forest, 150 feet east of Mrs. E. Hendrick's store, at corner of fence; iron post stamped "540 Adj 1903"	539.844
Cedar Forest, 3 miles northwest of, south of road, opposite Blackstock schoolhouse, in 3-foot oak tree; aluminum tablet stamped "702 Adj 1903"	701.952
Level Run, 2 miles northeast of, at road forks near J. B. Moses's farm; iron post stamped "704 Adj 1903"	703.894
Level Run, north of road opposite post office, in 2-foot oak tree; aluminum tablet stamped "719 Adj 1903"	718.491
Level Run, 3 miles northwest of, about 200 feet south of Sandy Coleman's house, on Hubbard's plantation, in rock ledge west of road; aluminum tablet stamped "694 Adj 1903"	694.144
Grit, in road in front of A. M. Peak's house, in south side of a 4-foot white-oak tree; aluminum tablet stamped "784 Adj 1903"	783.978
Grit, 2 miles northwest of, in forks of road at top of hill above mill creek ford; iron post stamped "728 Adj 1903"	727.702
Hurt, 0.5 mile east of, in a 2½-foot oak tree at top of hill west of Reed Creek, south of road on Dr. Adams's plantation; aluminum tablet stamped "710 Adj 1903"	710.330
Hurt, in right abutment (upstream side) of Southern Ry. bridge; top of southwest bolt fastening upstream and post seat to abutment	545.489

From Hurt south along Southern Ry. to point near Elba.

Hurt, in ground at east post of "Welcome" gate at Hurt's plantation; iron post stamped "559 Adj 1903"	558.871
Motley, 2 miles north of, on west side of railroad about 30 feet from track, between mileposts 201 and 202, in a 4-foot oak tree; aluminum tablet stamped "658 Adj 1903"	658.418
Motley, in ground at G. W. Shuler's store, at east corner; iron post stamped "771 Adj 1903"	770.529
Sycamore, 0.25 mile south of station, in north side of north chimney of G. W. Ramsey's house; aluminum tablet stamped "751 Adj 1903"	750.982
Elba, 3 miles north of, on west side of road from Elba to Sycamore, 600 feet south of railroad crossing, on east side of track, directly opposite Walton's mail box; iron post stamped "853 1903"	853.140
Elba, 2 miles north of, east of railroad, near first sign "Station 1 mile" referring to Elba, in a tree; aluminum tablet stamped "864 Adj 1903"	864.126

CHATHAM QUADRANGLE.

[Latitude 36° 45′–37°; longitude 79° 15′–79° 30′.]

From Elba west along Southern Ry. to Toshes.

Elba, 150 feet north of Mrs. Shelton's store, at southeast corner of Mrs. E. W. Shelton's ground; iron post stamped "844 Adj 1903"	843.589
Farmers, at northwest corner of E. H. L. Farmer's house, east of railroad, 60 feet from track; iron post stamped "1044 Adj 1903"	1,044.212
Pittsville, 1 mile east of, in ground at road forks; iron post stamped "965 Adj 1903"	965.358

Digitized by Google

	Feet.
Toshes, 1,500 feet east of, in railroad cut east of Toshes, 140 feet west of west end of trestle across Buck Branch, tributary to Fryingpan Creek, south of railroad, at east end of rock ledge; aluminum tablet stamped "681 Adj 1903"	681.203
Toshes, 125 feet south of post office and store (property of C. S. Bennett), 25 feet east of scale house, in rock ledge; aluminum tablet stamped "695 Adj 1903"	695.135

MONETA QUADRANGLE.

[Latitude 37°–37° 15′; longitude 79° 30′–79° 45′.]

From Toshes north along highways to Deerwood Ford (spur line).

Pig River, 1 mile south of bridge across, south of road, 0.25 mile above Graves's new dam on Pig River, in 4-foot white-oak tree; aluminum tablet stamped "625 Adj 1903"	624.38
Menla, about 1.5 miles southeast of, directly east of Frank Graves's house, 50 feet below his mail box, in east side of a 3-foot oak tree; aluminum tablet stamped "734 Adj 1903"	733.79
Menla, in front of J. T. Robinson's house, west of road, on east side of 4-foot oak tree; aluminum tablet stamped "862 Adj 1903"	861.92
Deerwood Ford, on Roanoke River, in northeast stone chimney of G. L. English's house; aluminum tablet stamped "618 Adj 1903"	620.87
Deerwood Ford, on sycamore tree on left bank of Roanoke River near transit station 2681+15; Virginia Ry. bench mark	601.62

CALLANDS QUADRANGLE.

[Latitude 36° 45′–37°; longitude 79° 30′–79° 45′.]

From Toshes west along Southern Ry. to Glade Hill.

Sandy Level, in quartz ledge near road crossing of Reddies Creek; aluminum tablet stamped "660 Adj 1903"	659.953
Ajax, 12 feet south of track, 450 feet west of crossing, east side of ledge of rock; aluminum tablet stamped "873 Adj 1903"	872.937
Penhook, 500 feet west of station, 8 feet south of track, in rock ledge; aluminum tablet stamped "982 Adj 1903"	981.591
Novelty, in ground at angle of store (former post office); iron post stamped "1009 Adj 1903"	1,008.579
Union Hall, in north face of chimney of Dudley & Co.'s store; aluminum tablet stamped "1006 Adj 1903"	1,005.357
Glade Hill, 1.5 miles east of, in east side of south chimney of Mrs. Matilda Bird's house, 350 feet north of track; aluminum tablet stamped "1008 Adj 1903"	1,007.352
Glade Hill, in a 3-foot chestnut oak tree, 100 feet east of former post office, 65 feet south of track; aluminum tablet stamped "1070 Adj 1908"	1,069.611

CAHAS MOUNTAIN QUADRANGLE.

[Latitude 37°–37° 15′; longitude 79° 45′–80°.]

From Glade Hill west along Southern Ry. to Rocky Mount.

Redwood, 2 miles east of, 125 feet north of track on Jas. O. Perdies's farm, 30 feet west of west end of second trestle west of Glade Hill, on left bank of small branch, in lower of two small rock ledges; aluminum tablet stamped "1060 Adj 1903"	1,059.638
Redwood, in small rock ledge in front of Perdies Bros.' store; aluminum tablet stamped "1178 Adj 1903"	1,177.906
Redwood, about 0.5 mile west of, 300 feet west of railroad crossing, 30 feet south of track, in east end of a large quartz bowlder north of road; aluminum tablet stamped "1138 Adj 1903"	1,138.063

Digitized by Google

	Feet.
Rocky Mount, 2.5 miles east of, 1,200 feet west of milepost 34, 75 feet west of railroad crossing, 9 feet south of center of track; iron post stamped "1193 Adj 1903"	1,192.841
Rocky Mount, 1.8 miles east of, in southeast wing wall of Norfolk & Western Ry. concrete culvert 1828, about 700 feet northeast of sign "1 mile to station;" aluminum tablet stamped "1106 Adj 1903"	1,106.274

BOYDTON QUADRANGLE.

[Latitude 36° 30′–36° 45′; longitude 78° 15′–78° 30′.]

From Clarksville east 14 miles down Roanoke River to Taylors Ferry (double spur line).

Clarksville, 2.5 miles below, on right bank of river on C. S. Hito's plantation, about 340 feet from bank of river, in granite ledge on left bank of a small ditch; aluminum tablet stamped "273 Adj 1903"	273.007
Clarksville, 7 miles below, opposite J. T. Lewis's plantation; opposite lower end of Finches Island, in granite ledge projecting from left bank of river; aluminum tablet stamped "250 Adj 1903"	249.855
Island Creek, 215 feet from right bank, 300 feet from river, in a granite ledge on James Bulloch's plantation; aluminum tablet stamped "259 Adj 1903"	259.156
Eagle Point, 1,500 feet east of ruins of mill, at foot of slope, 100 feet below Hospital Spring on Dr. Wimbish's plantation, in granite ledge; aluminum tablet stamped "239 Adj 1903"	239.337

BROOKNEAL QUADRANGLE.

[Latitude 37°–37° 15′; longitude 78° 45′–79°.]

From Brookneal to Perth.

Brookneal, on east side of road to ferry, nearly opposite May's cash store, about 75 feet north of Baptist Church; iron post stamped "564 Adj 1903" NOTE.—Permission to destroy this b. m. was granted Feb. 25, 1913.	564.155
Brookneal, on William Scott's plantation, 135 feet northwest of center of road to ferry, 50 feet from low-ground cornfield, about 350 feet north from ferryman's house at ferry, in rock ledge flush with ground; aluminum tablet stamped "388 Adj 1903"	388.000
Brookneal, 2.3 miles southwest of, about 20 feet from northwest corner of Hickory Road Church, in an 18-inch oak tree; aluminum tablet stamped "599 Adj 1903"	599.170
Perth, 225 feet northeast of store and former post office, south of road, on W. H. and J. L. Glass's property; iron post stamped "612 Adj 1903"	611.907

VIRGILINA QUADRANGLE.

[Latitude 36° 30′–36° 45′; longitude 78° 45′–79°.]

From Virgilina west along Southern Ry. to Denniston, thence north along Norfolk & Western Ry. to Houston.

Virgilina, in front of station; top of rail	516.1
Christie, in front of station; top of rail	479
Mayo (3.8 miles west of Christie), 300 feet east of station, top of east head wall of concrete railway culvert; aluminum tablet stamped "346"	345.649
Mayo, in front of station; top of rail	344.9
Mayo, 1.9 miles west of, in southwest corner of east abutment of railway bridge over Hyco Creek; aluminum tablet stamped "336"	335.497
Denniston, 50 feet north of Norfolk & Western Ry. station, in top of east head wall of small concrete railway culvert; aluminum tablet stamped "409"	409.449

Digitized by Google

	Feet.
Cluster Springs, 300 feet west of station, in front (brick) wall of Traynham Bros.' store; aluminum tablet stamped "499"	499.446
Cluster Springs, in front of station; top of rail	493.3
Cluster Springs, 3.5 miles north of, 5 feet east of track, in top of head wall of small concrete railway culvert; aluminum tablet stamped "339"	339.249
South Boston, railway bridge over Dan River; top of rail	336.6
Dan River, under bridge; water surface Sept. 17, 1908	302
South Boston, in northeast corner of north abutment pier at Norfolk & Western Ry. bridge over Dan River; aluminum tablet stamped "331"	330.976
South Boston, in front of station; top of rail	334.4
South Boston, 3.4 miles north of, 15 feet east of track, top of east head wall at small stone railway culvert; aluminum tablet stamped "447"	447.153
Houston, in front of station; top of rail	385.6
Houston, 0.7 mile north of, 20 feet west of track, in top of west head wall of small railway culvert; aluminum tablet stamped "381"	380.827

From South Boston northeast along Southern Ry. to Scottsburg.

South Boston, in front of station; top of rail	333.4
Wolftrap, 1.8 miles south of, 800 feet south of milepost 34, in top of southeast corner of east head wall of stone railway culvert; aluminum tablet stamped "318"	318.117
Wolftrap, in front of station; top of rail	359.2
Scottsburg, 1.7 miles south of, 10 feet west of track, 300 feet north of whistle post, in top of west head wall of small concrete railway culvert; aluminum tablet stamped "331"	331.421
Scottsburg, in front of station; top of rail	352.8

Bonsacks, Craigs Creek, Eagle Rock, and Natural Bridge quadrangles.

BOTETOURT, CRAIG, AND ROCKBRIDGE COUNTIES.

The elevations in the following list were determined by primary leveling and accord with Bulletin 434.

The leveling was done in Bonsacks and Natural Bridge quadrangles in 1905 by T. A. Green; in Craigs Creek quadrangle in 1907 by R. S. Deemer and in 1913 by H. S. Senseney; and in Eagle Rock quadrangle in 1905 by Green, in 1907 by Deemer, and in 1913 by Senseney.

BONSACKS QUADRANGLE.

[Latitude 37° 15′–37° 30′; longitude 79° 45′–80°.]

At Fincastle.

	et
Fincastle, southeast of courthouse, outside fence; top of cornerstone, telephone pole is marked "U. S. B. M. 1258.5"	1,258.07
Fincastle, south side of Botetourt County courthouse, 10 feet west of front entrance, in stone step; aluminum tablet	1,256.696
Fincastle, 0.4 mile west of, main crossroad, west of four corners; nail in hub on cedar tree, marked "U. S. T. P. 1275"	1,274.89

CRAIGS CREEK QUADRANGLE.

[Latitude 37° 30′–37° 45′; longitude 80°–80° 15′.]

From Hebron Church north along Craig Valley R. R. to Given.

Hebron Church, at road leading southeast; paint spot on stone, marked "1196"	1,195.54
Hebron Union Church, 1 foot south of east entrance to, in stone wall; aluminum tablet stamped "1192"	1,191.387

Digitized by Google

	Feet.
Hebron Church, 0.1 mile north of, at road north; paint spot on rock, marked "1161"	1,160.86
Hebron Church, 0.2 mile north of, road at hilltop, house to west, marked "1192"	1,191.8
Hebron Church, 0.4 mile north of, at road forks, west side of road; on root of tree marked "1196"	1,195.29
Hebron Church, 1.5 miles north of, at road leading northwest, south side of road; paint spot on large stone, marked "1178"	1,177.74
Given, 1 mile south of, road at bend to north	1,209.07
Given, 0.9 mile south of, railroad crossing; center of southwest rail, marked "1286"	1,286.13
Given, on northeast end of cattle stop; bolt marked "1288"	1,287.36
Given, 0.42 mile northeast of, west side of track, on first course of stone, at northwest corner of culvert; aluminum tablet stamped "1274"	1,274.096

EAGLE ROCK QUADRANGLE.

[Latitude 37° 30′–37° 45′; longitude 79° 45′–80°.

From Springwood southwest along highway to Fincastle.

Springwood, in center of bridge; nail (elevation of water surface in James River, 825)	857.43
Forks at mill, center of road; point on rock, marked "875"	874.63
Bridge over stream (water surface=888)	899.64
Springwood, 1.2 miles west of, on ledge of rocks, north side of road; cut square marked "U. S. B. M. 1000"	999.58
Springwood, 2 miles west of, at Shark's store, on south side of road, just east of crossroads, on ledge of rock; cut square marked "U. S. B. M. 1059"	1,058.81
Springwood, 3 miles southwest of, on south side of road, just east of main forks, on ledge; cut square marked "U. S. B. M. 1120"	1,119.98
Road to right through gate, south side of road; point on rock, marked "1158"	1,157.31
Springwood, 4.6 miles southwest of, at schoolhouse, on south side of road, 50 feet east of main forks, in hub on 4-foot oak tree; nail marked "U. S. B. M. 1235"	1,234.35
Springwood, 5.1 miles southwest of, in northwest corner of stone foundation of house owned by C. C. Burch, on north side; aluminum tablet	1,284.070
Springwood, 6.5 miles southwest of, on north side of road, 330 feet west of main forks, on ledge of limestone rock; square cut marked "U. S. B. M. 1257.5"	1,257.03
Springwood, 7.2 miles southwest of, on north side of road, 20 feet east of stream crossing, on limestone rock; square cut marked "U. S. B. M. 1179"	1,178.51
Springwood, 7.9 miles southwest of, on north side of road, 150 feet west of large branch at private crossroads; cross on top of rock marked "U. S. B. M. 1073"	1,072.24
Fincastle, forks of road, at east edge of town, near fence; point of rock marked "1233"	1,232.87
Fincastle, near forks, at foot of hill; point on curbstone marked "1195"	1,194.99

From point near Fincastle northwest along highway to point near Hebron Church.

Fincastle, 1.1 miles northwest of, on west side of road, just south of second-class road to left, through gate, on ledge of limestone rock; square cut marked "U. S. B. M. 1225"	1,224.72
"Grove Hill," at private road leading to; point on rock marked "1124"	1,123.61
Catawba Creek; water surface	1,054.38

Digitized by Google

	Feet.
Fincastle, 1.8 miles northwest of, on south side of road, just west of main forks, at small bridge; square cut on limestone rock, tree marked "U. S. B. M. 1067"	1,066.14
Fincastle, 3.2 miles northwest of, on east side of road, 30 feet northwest of house, in hub on 2-foot oak tree; nail marked "U. S. B. M. 1232"	1,231.63
North fork; water surface marked "1200"	1,199.21
Poorhouse Hollow, at mouth of, on north side of creek, just east of second-class road, on limestone rock; square cut marked "U. S. B. M. 1256"	1,255.521
Fincastle, 4.4 miles northwest of, at mouth of "Poorhouse Hollow," 650 feet west of main forks, north of north fork of Catawba Creek, just east of second-class road, in bench of limestone rock; aluminum tablet stamped "1256" (as reset in 1913)	1,255.345
Fincastle, 5.3 miles northwest of, on north side of road, just west of forks at ford, in hub on 3-foot sycamore tree; nail marked "U. S. B. M. 1346"	1,345.50
Fincastle, 5.7 miles northwest of, at foot of mountain, on west end of south abutment of bridge over stream; chiseled square marked "U. S. B. M. 1474"	1,473.61
Fincastle, 6.2 miles northwest of, on east side of gully, in hub on 1-foot oak tree; nail marked "U. S. B. M. 1624"	1,623.09
Price's Mountain Gap, at center of road; marked "1961"	1,960.41
Fincastle, 7 miles northwest of, at Craig-Botetourt county-line crossing, at gap on Price's Mountain, on county-line rock, on south side of road; paint spot marked "U. S. B. M. 1959"	1,958.963
Fincastle, 7.6 miles northwest of, on rock on south side of road, 100 feet west of gully; square cut marked "U. S. B. M. 1662"	1,661.44
Fincastle, 7.7 miles northwest of, road at sharp turn to north; painted on rock, marked "1617"	1,617.19
Fincastle, 8.1 miles northwest of, road at turn to north; painted on rock, marked "1385"	1,385.17
Fincastle ,8.3 miles northwest of, north side of road, 50 feet east of house on south side of road, on large stone; paint spot marked "1334"	1,333.69
Fincastle, 8.9 miles northwest of, on top of hill, at house on north side of road, marked "1270"	1,270.0
Fincastle, 9.1 miles northwest of, on northwest abutment of wagon bridge; paint spot marked "1226"	1,225.92
Fincastle, 9.2 miles northwest of; bridge floor marked "1211"	1,210.8

From Eagle Rock west along Craig Valley Branch of Chesapeake & Ohio Ry. to Given.

Eagle Rock, 0.2 mile west of, in northwest abutment of wagon bridge over James River; aluminum tablet stamped "934"	934.550
Eagle Rock, 0.7 mile west of, on railroad bridge over James River; top of crossties	943.2
James River; surface of water under bridge Aug. 22, 1913	908.9
Bessemer, at Garges's sawmill, southwest corner of cattle guard; temporary bench mark	942.55
Eagle Rock, 1.9 miles west of, west end of railroad bridge over Craig Creek, north side of track; bolt (30.2 feet above water) Aug. 22, 1913	946.92
Eagle Rock, 2.9 miles west of, 0.5 mile west of road crossing, 900 feet west of milepost marked "N. C. 25, E. M. 2," south side of track, in culvert; bronze tablet stamped "984"	983.856
Pinnacle, 2.2 miles east of, 0.9 mile west of milepost marked "E. M. 3, N. C. 26," north side of track, in northwest corner of culvert; aluminum tablet stamped "988" (not found in 1913)	985.412

Digitized by Google

	Feet.
Eagle Rock, 5.4 miles west of, 100 feet west of cut at the "Pinnacles," on northeast corner of cattle guard; bolt	1,096.00
Parr post office, 1.4 miles east of, west side of track, southwest corner of culvert; aluminum tablet stamped "1039" restamped "1036"	1,036.030
Parr post office, 2.1 miles east of, at road crossing, northwest corner of cattle guard; bolt marked "1055"	1,052.23
Parr post office, west side of track, 10 feet north of small creek; paint spot on rock	1,026.713
Hipes station, west side of track, in southwest corner of culvert; aluminum tablet stamped "1025." (A Deemers bench mark; could not be found in 1913) 1,022.556 or	1,023.058
Hipes station, 400 feet west of south side of track, in culvert; bronze tablet stamped "1033"	1,033.373
Hipes station, 1.1 miles west of, railroad bridge over Craig Creek, southwest corner; bolt	1,051.39
Old sawmill, at road crossing; top of rail	1,081.1
Hipes station, 1.7 miles west of, northeast corner of cattle guard; bolt	1,082.85
Schoolhouse, at crossing west of; top of rail	1,067.2
Surber, in front of station; top of rail	1,066.5
Surber, 300 feet south of station, west side of track, in culvert; aluminum tablet stamped "1060" restamped "1057"	1,057.221
Surber, 1.9 miles west of, at road crossing, northeast corner of cattle guard; bolt	1,118.40
Oriskany, at road crossing; top of rail	1,142.8
Oriskany, 500 feet west of station, south side of track, in culvert; aluminum tablet stamped "1130" restamped "1127"	1,127.291
Given, 0.4 mile east of, north side of track, in culvert; aluminum tablet stamped "1274"	1,274.096

From point 1.9 miles west of Eagle Rock northwest along highway to Strom, thence south to Parr.

Bessemer, 4.5 miles west of, on road to Strom post office, 25 feet west of forks, in root of tree; copper nail	958.62
Strom post office, 300 feet east of, west side of road, in large bowlder; aluminum tablet stamped "1023"	1,023.162
East side of road, 500 feet south of house, in root of tree; nail	1,240.82

NATURAL BRIDGE QUADRANGLE.

[Latitude 37° 30′–37° 45′; longitude 79° 30′–79° 45′.]

From Buchanan northeast along Chesapeake & Ohio Ry. to Gilmore Mills.

Buchanan, 3.3 miles northeast of, 200 feet east of house occupied by Charles Stinnett, in ledge of rock; aluminum tablet	818.701
NOTE.—Permission to destroy this b. m. was granted June 10, 1913.	
Dillon, in front of station, main track; top of north rail	813.9
Indian Rock, in southeast corner of west abutment at south side of railway bridge over Whistle Creek; aluminum tablet	794.164
Indian Rock, in front of station; top of north rail of main track	795.9
Rocky Point, in southeast corner of east abutment of railroad bridge over Roaring Run; aluminum tablet	771.149
Alpine, in front of station; top of south rail	773.6
Gilmore Mills, in front of station; top of north rail	751.1

Digitized by Google

From Gilmore Mills north along highway via Natural Bridge and Longwood to Murat.

	Feet.
Natural Bridge, on north side of bridge, in rock standing in inclosure; aluminum tablet stamped "1150 Adj 1905"	1,149.661
Natural Bridge, 2.6 miles northeast of, at main road forks 1.5 miles southwest of Fancy Hill post office, in rock north of road just east of forks; aluminum tablet stamped "1231 Adj 1903"	1,231.014
Longwood, 1 mile northeast of, in fifth brick from west at southwest corner (south side) of Seceder Church, in fourth course of bricks above foundation; aluminum tablet stamped "1179 Adj 1903"	1,178.839
Longwood, 3.8 miles northeast of, 75 feet south of stream crossing, in large rock; aluminum tablet stamped "1251 Adj 1903"	1,250.677
Murat, in southeast corner of south abutment of south end of highway bridge over Buffalo Creek; aluminum tablet stamped "1021 Adj 1903"	1,021.262

From Buchanan north along highways via Rapps Mill to Murat.

Buchanan, 3 miles north of, on Mr. Peachin's place, in sandstone 75 feet north of house occupied by Charles Miller; aluminum tablet	1,161.841
Buchanan, 7 miles north of, at main road forks just west of Dunkard Church in rock on east side of road just north of forks; aluminum tablet stamped "1597 Adj 1903"	1,596.574
Rapps Mill, 50 feet southeast of, in front yard of James B. Rapp, in sandstone; aluminum tablet stamped "1497 Adj 1903"	1,496.550
Rapps Mill, 3.2 miles northeast of, 210 feet north of main forks, in ledge of rock east of road; aluminum tablet stamped "1277 Adj 1903"	1,277.262
Murat, 3.5 miles west of, 6.2 miles northeast of Rapps Mill, at iron wagon bridge over South Buffalo Creek, on south side at southeast corner of east abutment; aluminum tablet stamped "1150 Adj 1903"	1,149.707

Up North Buffalo Creek via Oakdale and over Biggs Mountain to Dagger Springs and Gala.[1]

Oakdale, 1.5 miles southwest of, north of road, in rock 30 feet west of main road forks; aluminum tablet stamped "1307 Adj 1903"	1,308.004
Oakdale, 6 miles southwest of, at gap at head of North Buffalo and Mill creeks, in large bowlder; aluminum tablet stamped "2179 Adj 1903"	2,179.680
Oakdale, 9.8 miles southwest of, at crossroads, 2 miles southeast of Dagger Springs, directly north of four corners, in rock north of road; aluminum tablet stamped "1392 Adj 1903"	1,392.463

Antietam quadrangle.

LOUDOUN COUNTY.

The elevations in the following list are based on precise-level lines of the Coast and Geodetic Survey and the Baltimore & Ohio Railroad.

The leveling in Antietam quadrangle was done in 1907 by W. R. Winstead.

Elevations in Maryland appear in Bulletin 563; those in West Virginia in Bulletin 399.

[1] An arbitrary adjustment of 1 foot was made between starting point and first bench mark of this line.

Digitized by Google

ANTIETAM QUADRANGLE.

[Latitude 39° 15′–39° 30′; longitude 77° 30′–77° 45′.]

From Point of Rocks southwest along highway to Taylorstown, thence northwest to Harpers Ferry.

	Feet.
Taylorstown, 0.1 mile west of post office, in center of south end of pillar at west end of iron bridge over Catoctin Creek; aluminum tablet stamped "Maryland 272 Adj"	272.000
Taylorstown, 2.6 miles northwest of, 50 feet east of road fork south, near short bend in road to north, 15 feet west of barn, on top of stone; chiseled square marked "479.6 U. S. B. M."	479.35
Lovettsville, in front face of post office at G. F. Eamich's store, east side of door, between door and window; aluminum tablet stamped "Md 507 Adj"	506.800
Lovettsville, 3.4 miles northwest of, 0.1 mile north of road fork, 150 feet north of second-class fork west, 1,000 feet east of house, 8 feet east of road by fence bars, in west side of large sandstone; aluminum tablet stamped "Md 471 Adj"	470.629
Lovettsville, 7.1 miles northwest of, 0.4 mile west of sawmill, about 0.2 mile west of old house, at spring on left of road in front of house, 12 feet north of road between road and river, in top of large native rock; aluminum tablet stamped "Adj 254"	253.401
Lovettsville, 8.7 miles northwest of, in north side at center of bridge over Shenandoah River at Harpers Ferry; nail marked "281"	281.19

From point 1 mile east of Harpers Ferry south to Neersville.

Neersville, 300 feet north of road forks, 0.2 mile north of former post office, in northeast corner of schoolhouse; aluminum tablet stamped "615 Adj"	614.482

Bramwell quadrangle.

[Latitude 37° 15′–37° 30′; longitude 81° 15′–81° 30′.]

TAZEWELL COUNTY.

The elevations in the following list are based on the height of the permanent bench mark at Graham, established by precise leveling in 1909. The leveling was done by T. A. Green in 1909. Elevations in this quadrangle in West Virginia can be found in Bulletin 477.

From divide at head of Abbs Valley southwest to Smith store, thence north to State line (part of adjusted circuit).

	Feet.
Smith store, 350 feet south of forks, 75 feet east of road, 200 feet west of Mrs. W. T. Harrison's barn, on west side of running stream, in sandstone; aluminum tablet stamped "2598 Va 1909"	2,597.895

From State line southeast along Norfolk & Western Ry. to Graham.

Virginia-West Virginia State line, railway crossing; top of rail	2,309.4
Flattop, 0.8 mile east of, on rock 40 feet east of milepost 370; chiseled square.	2,321.20
Falls Mills, in front of station; top of rail	2,330.1
Falls Mills, 1.5 miles east of, 500 feet west of milepost 368, north end of east abutment of railroad bridge 840; aluminum tablet stamped "2348"	2,347.640
Falls Mills, 2.8 miles east of, at old sawmill, 100 feet east of road crossing on north end of west abutment of iron railroad bridge 835; chiseled square	2,370.10
Graham, in front of signal tower; top of rail	2.386.2

Digitized by Google

	Feet.
Graham, at northwest corner of station platform, on granite curbing; chiseled square	2,393.46
Graham, on west side of front entrance to Bank of Graham, third step above pavement; aluminum tablet stamped "2389"	2,389.450

From State line southwest along Norfolk & Western Ry. to Pocahontas (mean of two lines).

Pocahontas, in front of station; top of rail	2,318.8
Pocahontas, on west side of front entrance to Bank of Pocahontas, in first step above pavement; aluminum tablet stamped "2320 Va 1909"	2,320.057

From State line near Nemours, W. Va., southwest up Abbs Valley to point near divide (part of adjusted circuit).

Nemours, 1.1 miles southwest of, east of road, 20 feet west of gate, on limestone; chiseled square marked "U. S. B. M. 2334"	2,330.78
Nemours, 1.9 miles southwest of, west of road, at top of knoll, on limestone; chiseled square marked "U. S. B. M. 2395"	2,395.18
Nemours, 2.8 miles southwest of, at road forks, 300 feet east of large red barn, 30 feet north of gate east of road, in limestone; aluminum tablet stamped "2443 Va 1909"	2,443.501
Nemours, 4 miles southwest of, 300 feet south of Mr. Browning's house, west of road, at sharp bend, on limestone ledge; chiseled square marked "U. S. B. M. 2411"	2,411.52
Nemours, 4.9 miles southwest of, at junction with main road running east, 15 feet west of telephone pole at northeast corner of road junction, on limestone; chiseled square marked "U. S. B. M. 2441"	2,441.27
Nemours, 6.4 miles southwest of, south of road, on top of hill, north of fence, in sandstone bowlder; aluminum tablet stamped "2523 Va 1909"	2,522.908
Nemours, 7.5 miles southwest of, 0.3 mile southwest of J. G. Bailey's house north of road, on limestone outcrop; chiseled square marked "U. S. B. M. 2517"	2,516.72
Nemours, 8.3 miles southwest of, at junction with road running northwest through gate, point on limestone, 5 feet north of W. A. Barrett's mail box, at southeast corner of road junction; mail box marked "U. S. B. M. 2529"	2,528.92

From Smith store north to State line (part of adjusted circuit).

Smith store, 1.5 miles northwest of, south of road, 50 feet west of sharp bend, on sandstone outcrop; chiseled square marked "U. S. B. M. 2601"	2,601.26

Middlesboro quadrangle.

(Latitude 36° 30′–36° 45′; longitude 83° 30′–83° 45′.)

LEE COUNTY.

The elevation given below was determined by a double line of primary leveling brought from a precise-level bench mark near Mascot, Tenn., to Cumberland Gap and thence by a single spur line to Wheeler. The leveling was done by F. L. Foust in 1903. For elevations in Kentucky see Bulletin 554, and for those in Tennessee see Bulletin 441.

From Cumberland Gap east along Louisville & Nashville R. R. to Wheeler.

	Feet.
Cumberland Gap, at summit, on Kentucky-Tennessee-Virginia stone corner post; chisel point	1,648.47

Digitized by Google

Abingdon quadrangle, embracing Damascus, Glade Springs, Marion, and Mount Rogers 15′ quadrangles.

[Latitude 36° 30′–37°; longitude 81° 30′–82°.

GRAYSON, RUSSELL, SMYTH, AND WASHINGTON COUNTIES.

The elevations in the following list were determined in 1908 and 1909 by J. B. Metcalfe, jr., by a single unchecked line from a point 0.3 mile northeast of Housley, Tenn., in Roan Mountain quadrangle, to Damascus, Va. Other lines are closed circuits dependent on this line. For elevations in Abingdon quadrangle in North Carolina and Tennessee see Bulletin 441.

From Damascus south along Laurel Ry. to Laurel Bloomery, thence east along highways to Little Horse Creek, thence north to point 3.1 miles northeast of Konnarock.

	Feet.
Little Horse Creek, 4.7 miles north of, near junction of Big Horse Creek and Mud Fork, near Bill Miller's house, 10 feet east of road, 20 feet northeast of forks, in ledge of rock; aluminum tablet stamped "2954"	2,953.662
Little Horse Creek, 8.5 miles north of, 8 feet east of road, 300 feet northwest of old house; cross on ledge of rock, marked "3984"	3,983.63
Little Horse Creek, 10.2 miles north of, about 0.25 mile from top of gap between Whitetop and Rogers mountains, 60 feet south of second-class road forks to southwest, 6 feet west of road; cross on ledge of rock, marked "4535"	4,534.20
Little Horse Creek, 10.2 miles north of, about 0.25 mile from top of gap between Whitetop and Rogers mountains, about 60 feet south of second-class road fork to southwest, about 7 feet west of road, in ledge of rock; aluminum tablet stamped "4535"	4,533.831
Konnarock, 6.8 miles northeast of, about halfway up mountain road over gap between Whitetop and Rogers mountains, east of road; nail in root of chestnut tree, marked "4102"	4,101.23

From Damascus northwest along Virginia-Carolina Ry. to Abingdon.

Damascus, 2.4 miles northwest of, 20 feet west of railroad, 100 feet south of milepost A 13, in ledge of limestone rock; aluminum tablet stamped "1834"	1,833.671
Baron station, about 0.5 mile southeast of, 8 feet north of railroad, 35 feet west of milepost A 9, in limestone rock; aluminum tablet stamped "1763"	1,762.700
Watauga, 1 mile northwest of, 10 feet west of railroad, 260 feet north of bridge 3 over creek, in ledge of rock in cut; aluminum tablet stamped "1924"	1,923.707
Abingdon, south side of new building being put up by Mr. Sumner, facing on Main Street, and 200 feet northeast of Confederate monument, about 3.5 feet from ground and 2 feet from southeast corner of building, in brick wall; aluminum tablet stamped "2096"	2,095.386

From Abingdon east along Norfolk & Western Ry. to Marion.

Abingdon, 3.8 miles east of, 10 feet north of railroad, 12 feet east of milepost "B 19 N 389," 50 feet east of cross roads, in rock; aluminum tablet stamped "2167"	2,166.715
Meadow View, 1,030 feet west of station, 12 feet north of railroad, on north end of culvert over small creek, in rock; aluminum tablet stamped "2110"	2,108.793

Digitized by Google

	Feet.
Emory, 2.2 miles east of, 20 feet south of railroad, southeast corner of stone culvert, 40 feet north of road, running parallel to railroad, 1,450 feet east of milepost "B 26 N 382," in top of rock; aluminum tablet stamped "2083"	2,082.674
Emory, 6.6 miles east of, 10 feet south of railroad, on southwest corner of culvert, 1,950 feet east of milepost "B 31 N 377," in rock; aluminum tablet stamped "2047"	2,046.533
Chilhowie, 0.8 mile east of, 6 feet south of railroad, on southwest abutment of railroad bridge over Middle Fork of Holston River, in top face; aluminum tablet stamped "1950"	1,949.456
Chilhowie, 2 miles east of, 10 feet east of bridge over Middle Fork of Holston River, on joint of south rail of railroad; marked "1964"	1,963.61
Chilhowie, 3.5 miles east of, 7 feet north of railroad, about 1 mile east of Sevenmile Ford, on northeast corner of abutment to trestle over Middle Fork of Holston River and to arch over road, in top face; aluminum tablet stamped "2013"	2,012.162
Marion, 8 feet north of railroad, about 0.25 mile west of station, on top face of abutment to bridge over Middle Fork of Holston River; cross on top of stone marked "2126.7"	2,126.04
Marion, on west side of station, 1 foot south of northwest corner and 4 feet from ground, in brick wall; aluminum tablet stamped "2145"	2,144.624
From Damascus east along Virginia-Carolina Ry. to point 3.1 miles northeast of Konnarock.	
Damascus, 0.2 mile west of station, south side of Main Street, in east face of brick wall, 2.7 feet south of northeast corner of Bank of Damascus, 3.4 feet from ground; aluminum tablet stamped "1929"	1,928.344
Taylors Valley, 1,360 feet northwest of station, 7 feet east of railroad, in ledge of rock in cut; aluminum tablet stamped "2366"	2,365.210
Konnarock, 3,200 feet southwest of station, 10 feet north of railroad, in ledge of rock; aluminum tablet stamped "2896"	2,895.695
Konnarock, 3.1 miles northeast of, 12 feet north of road forks, on road to Chilhowie; nail in root of 4-foot red-oak tree, marked "3138.5"	3,137.87
From point 3.1 miles northeast of Konnarock north along highways to Chilhowie.	
Konnarock, 3.7 miles northeast of, on road to Chilhowie, east side of road, south side of mountain; cross on ledge of rock, marked "3187.3"	3,186.61
Konnarock, 5 miles northeast of, on road to Chilhowie, on top of Skulls Gap, east side of road; nail in root of 2.5-foot white-oak tree, marked "3659.8"	3,659.16
Konnarock, 7 miles north of, on north side of mountain, east side of road; nail in root of 1.5-foot red-oak tree, marked "2975"	2,973.99
Konnarock, 9.4 miles north of, on road to Chilhowie, 35 feet east of road, 50 feet south of large spring with house over it, in limestone rock projecting from foot of hill; aluminum tablet stamped "2240"	2,239.212
Konnarock, 12.2 miles north of, on road to Chilhowie, 10 feet east of road, 250 feet south of large white house on east side of road and red barn on west side, in ledge of limestone rock; aluminum tablet stamped "2222"	2,220.999
Konnarock, 13.7 miles north of, on road to Chilhowie, 30 feet east of road forks, 2 feet above level of road; cross on ledge of rock, marked "2097.2"	2,096.60
From Marion north along highways to Chatham Hill, thence west to Hayter Gap, thence south to Abingdon.	
Marion, 2.5 miles north of, on road to Chatham Hill, in forks of road to west, near Mr. Copenhaver's house; cross on ledge of rock, marked "2202"	2,201.43
Marion, 5.2 miles north of, on road to Chatham Hill, north side of mountain road, about 0.5 mile from bottom of same; cross on rock, marked "2433"	2,432.25

Digitized by Google

	Feet.
Marion, 6.2 miles north of, on road to Chatham Hill, east side of mountain road, just opposite old sawmill; cross on ledge of rock, marked "2834"	2,833.53
Marion, 7.8 miles north of, on road to Chatham Hill, 6 feet east of road, 300 feet north of point where road crosses top of mountain, in ledge of rock; aluminum tablet stamped "3454"	3,453.478
Marion, 10.5 miles north of, on road to Chatham Hill, 3 feet west of road and 300 feet west of large barn; cross on ledge of rock, marked "2392.4"	2,391.78
Chatham Hill, 1 mile west of, 250 feet south of road forks, 60 feet west of White Oak Branch, 6 feet west of road, in ledge of limestone; aluminum tablet stamped "2050"	2,049.128
Chatham Hill, 2.7 miles west of, on road to Saltville, at top of hill, 6 feet west of road, 10 feet north of gate to field; cross on ledge of rock, marked "2330.4"	2,329.76
Chatham Hill, 6.9 miles west of, 220 feet west of road forks, 200 feet west of point where Cove Creek crosses road, about 100 feet southeast of Cove Creek schoolhouse, 6 feet north of road, 4 feet above level of road, in ledge of limestone; aluminum tablet stamped "1810"	1,808.841
Broad Ford, 1.2 miles west of, on road to Saltville, 6 feet north of road, 3 feet above level of road, in cut along North Fork of Holston River, in slanting ledge of rock; aluminum tablet stamped "1758"	1,757.782
Saltville, 3.9 miles east of, on road to Saltville, 175 feet west of road forks, about 0.5 mile east of Southern Gypsum Works, 3 feet east of road; cross on ledge of rock, marked "1741.6"	1,740.99
Saltville, 0.6 mile east of, 200 feet north of store at Cedar Branch, 8 feet north of road, on northwest abutment to bridge over North Fork of Holston River, in top face; aluminum tablet stamped "1714"	1,713.111
Saltville, 2.3 miles west of, on road to Hayter Gap, 7 feet south of road forks and 45 feet northeast of house; cross on large rock, marked "1926"	1,925.34
Saltville, 5.1 miles west of, on road to Hayter Gap, 100 feet west of bridge over Tumbling Creek, in road forks north; cross on rock, marked "1765"	1,764.09
Saltville, 5.8 miles west of, on road to Hayter Gap, 30 feet north of road forks south; cross on sandstone, marked "1733"	1,732.54
Saltville, 5.8 miles west of, on road to Hayter Gap, 575 feet west of road forks south, about 0.8 mile southwest of Hazel Springs, 75 feet east of where creek crosses road, 6 feet north of road, in sandstone ledge; aluminum tablet stamped "1740"	1,739.913
Saltville, 9.3 miles east of, on road to Hayter Gap, 100 feet north of forks north where road goes over Hayter Gap, 16 feet west of road, in sandstone ledge; aluminum tablet stamped "1656"	1,655.950
Hayter Gap, 1 mile south of, on road to Abingdon, 10 feet northwest of road forks east, at east end of bridge over Wolf Creek, 150 feet northeast of junction of North Fork of Holston River and Wolf Creek; cross on rock, marked "1532.4"	1,531.78
Hayter Gap, 1 mile south of, on road to Abingdon, 100 feet northeast of bridge over Wolf Creek, 75 feet northeast of road forks east, 10 feet east of road, in ledge of rock; aluminum tablet stamped "1536"	1,535.202
Hayter Gap, 4.7 miles south of, on road to Abingdon, 6 feet north of road forks south, near house; cross on ledge of rock, marked "1498"	1,497.32
Hayter Gap, 6 miles south of, on road to Abingdon, 7 feet east of road, 50 feet south of store, on north bank of Tool Creek; cross on ledge of rock, marked "1500"	1,499.62
Hayter Gap, 6 miles south of, on road to Abingdon, 75 feet south of Baily's store on Tool Creek, 15 feet east of where road crosses Tool Creek, in ledge of rock; aluminum tablet stamped "1503"	1,502.043

Digitized by Google

	Feet.
Hayter Gap, 9.8 miles south of, 1 mile southwest of White's mill, on road to Abingdon, 20 feet northwest of second-class road west, 300 feet south of creek crossing, in ledge of rock; aluminum tablet stamped "2008"	2.007.636

From Hayter Gap northeast along highways to Belfast Mills (spur line).

Hayter Gap, 2.4 miles north of, on top of Clinch Mountain, 10 feet west of road, in sandstone ledge; aluminum tablet stamped "3012"	3,010.920
Hayter Gap, 4.6 miles north of, northeast of road forks east, 75 feet west of point where Soop Creek crosses road, about 0.25 mile south of Rockdell; cross on rock, marked "2188.3"	2,187.67
Hayter Gap, 6.1 miles north of, about 300 feet south of road west to Elk Garden, 6 feet east of road, in limestone ledge; aluminum tablet stamped "2131"	2,130.707
Old Rosedale, about 400 yards east of, 150 feet west of road north to Honaker, 8 feet north of road, in limestone ledge; aluminum tablet stamped "2281"	2,280.669
Rosedale, about 2.5 miles east of, 30 feet southwest of road forks north, south side of road; cross on rock, marked "2330.6"	2,330.03
Rosedale, 2.8 miles east of, about 0.25 mile west of John Vessel's residence, 100 feet south of road forks, 10 feet east of road, in sandstone; aluminum tablet stamped "2314"	2,313.810
Belfast Mills, 20 feet west of forks, 35 feet east of blacksmith shop; cross painted on rock, marked "2280"	2,279.15
Belfast Mills, 1 mile east of, 75 feet south of road, 300 feet northeast of C. W. Grant's residence, 6 feet north of branch of Indian Creek, in limestone ledge; aluminum tablet stamped "2293"	2,292.530

Big Stone Gap, Bramwell, Bucu, Burkes Garden, Clintwood, Coeburn, Glade Springs, Hagan, Hansonville, Middlesboro, Nolansburg, Pound, Pounding Mill, Regina, Richlands, Sneedville, and Wise quadrangles.

DICKENSON, LEE, RUSSELL, TAZEWELL, AND WISE COUNTIES.

The following elevations were determined by primary leveling, using prism level and yard rod. The line was double run from Graham to Cumberland Gap. The circuit from Norton via Pound, Clintwood, and Dante, to a point near St. Paul was single. The elevations, which were based on the 1903 adjustment, are unchanged by the 1907 or 1912 adjustments and accord with those in bulletins 434 and 441.

The leveling was done by L. F. Biggs in 1912. Additional leveling with Y level and New York rod was done in 1912 in Clintwood quadrangle by C. W. Arnold, in Wise quadrangle by J. B. Metcalfe, in Pound quadrangle by Arnold, Metcalfe, and H. S. Senseney, and in 1913 by Senseney and S. R. Archer; in Bucu, Clintwood, Coeburn, and Regina quadrangles in 1913 by Senseney.

The work was done in cooperation with the State.

BIG STONE GAP QUADRANGLE.

[Latitude 36° 45′–37°; longitude 82° 45′–83°.]

From milepost N 7 along Louisville & Nashville R. R. to point 3 miles east of Pennington.

	Feet.
Milepost N 7; spike in base of, marked "1773"	1,773.24
Milepost N 8; spike in base of, marked "1717"	1,717.27

Digitized by Google

	Feet.
Appalachia, 1.2 miles east of, 400 feet west of milepost N 9; in large rock 15 feet south of track; aluminum tablet stamped "1669 B 35 1912"	1,669.206
Milepost N 10, 900 feet east of; spike in west support of switch stand, marked "1655;" aluminum tag placed near spike	1,654.97
Milepost N 11, opposite; spike in base of section post, marked "1635"	1,635.46
Big Stone Gap, 2 miles east of station, 300 feet west of milepost N 12, in north end of east abutment of overhead railroad bridge at point where railroad crosses river; aluminum tablet stamped "1580"	1,580.297
Milepost N 13; spike in base, marked "1526"	1,525.80
Big Stone Gap, in front of station; top of rail	1,588.5
Big Stone Gap, 1 mile west of station, 400 feet east of milepost N 15, in cut, 15 feet south of track, in large rock; aluminum tablet stamped "1463 B 37 1912"	1,462.831
Milepost N 16; spike in base, marked "1459"	1,458.56
Milepost N 17; spike in base, marked "1469"	1,469.14
Big Stone Gap, 4 miles west of station, 75 feet east of milepost N 18, 20 feet north of track, in rock; aluminum tablet stamped "1460 B 38 1912"	1,459.966
Milepost N 19; spike in base, marked "1488"	1,487.97
Milepost N 20; spike in base, marked "1470"	1,469.92
Ohlinger, in front of station; top of rail	1,502.0
Ohlinger, 2 miles west of station, 375 feet west of milepost N 21, 10 feet north of track, in rock cut; aluminum tablet stamped "1434 B 39 1912"	1,434.055
Milepost N 22; spike in base, marked "1417"	1,416.73
Milepost N 23; spike in base, marked "1416"	1,415.94
Dryden, 1 mile east of, 350 feet west of milepost N 24, in rock 10 feet south of track; aluminum tablet stamped "1435 B 40 1912"	1,434.118
Milepost N 25, opposite Dryden station; spike in base of milepost, marked "1440"	1,440.37
Milepost N 26; spike in base, marked "1480"	1,480.13
Pennington, 3 miles east of, 300 feet west of milepost N 27, 10 feet north of track, in rock cut; aluminum tablet stamped "1483 B 41 1912"	1,483.282

BRAMWELL QUADRANGLE.[1]

[Latitude 37° 15′–37° 30′; longitude 81° 15′–81° 30′.]

From Graham along Norfolk & Western Ry. to Furnace.

Graham, on west side of front entrance to Bank of Graham; aluminum tablet stamped "2389"	2,389.450
Furnace signboard, in second telegraph pole west of; spike, aluminum tag stamped "2391"	2,390.61

BUCU QUADRANGLE.

[Latitude 37°–37° 15′; longitude 82°–82° 15′.]

From milepost N 45 along Norfolk & Western Ry. to milepost N 43.

Milepost N 44; spike in base, marked "1768"	1,767.82
Honaker, 2.5 miles west of, in limestone 20 feet north of track and on east side of creek; aluminum tablet stamped "1719 B 18 1912"	1,718.625
Milepost N 43; spike in base, marked "1685"	1,684.64

[1] For elevations in West Virginia in this quadrangle see Bulletin 477.

Digitized by Google

From Colley south 2 miles, thence west along highway to Street schoolhouse, thence north to Hanger, thence west to a point 1.1 miles west of Vicey.

	Feet.
Colley post office, opposite, at foot of drain, in mulberry tree; copper nail with washer, painted "U. S. B. M. 1299"	1,298.50
Colley post office, about 1.5 miles south of, east side of road, in ledge; aluminum tablet stamped "1304 Va"	1,304.241
Colley post office, about 2 miles south of, 15 feet south of Priest Fork, west side of road, in large stump; copper nail with washer, painted "U. S. B. M. 1311"	1,310.99
Priest Fork, about 1.2 miles east of mouth of, on south side of road to Abners Gap, in root of tree; copper nail with washer, painted "U. S. B. M. 1452"	1,452.11
Abners Gap, summit of, center of road; elevation painted "U. S. 1582"	1,582.1
Honaker Lumber Co.'s log road, at switch; top of rail	1,496.6
Bee post office, about 0.1 mile east of, 75 feet west of switch, north side of track, in ledge; aluminum tablet stamped "1482 Va"	1,481.737
Bee post office, about 1.1 miles east of, north side of track, on Russell Fork, in root of tree; copper nail with washer, painted "U. S. B. M. 1424"	1,424.00
Deel post office, about 300 feet east of, 50 feet west of switch, in root of chestnut tree; copper nail with washer, painted "U. S. B. M. 1432"	1,431.63
Hurricane schoolhouse, about 300 feet south of, opposite Jackson's store, 15 feet west of footbridge over Hurricane Creek, in ledge; aluminum tablet stamped "1457 Va"	1,456.446
Forks of Hurricane, 20 feet east of road crossing, south side of road, in root of apple tree; copper nail with washer, painted "U. S. B. M. 1492"	1,492.18
Forks of Hurricane, about 1.2 miles east of, 300 feet south of Sam Presley's house, west side of road, in root of tree; copper nail with washer, painted "U. S. B. M. 1548"	1,547.47
Presley schoolhouse, about 600 feet west of, 15 feet south of road, in ledge; aluminum tablet stamped "1609 Va"	1,608.571
Presley schoolhouse, about 1.2 miles east of, south side of road, in root of tree; copper nail with washer, painted "U. S. B. M. 1652"	1,651.49
Presley schoolhouse, about 2.4 miles east of, about 500 feet east of Keene's store, south side of road, in root of tree; copper nail with washer, painted "U. S. B. M. 1705"	1,704.78
Presley schoolhouse, about 3 miles east of, about 150 feet west of sharp bend in road, at foot of Fletcher's Ridge, north side of road, in ledge; aluminum tablet stamped "1723 Va"	1,722.682
Fletcher's store, center of road opposite; elevation painted "U. S. B. M. 2290"	2,290.2
Indian Grave Gap, about 1 mile south of, at fork in road, in root of tree; copper nail with washer, painted "U. S. B. M. 2450"	2,449.68
Indian Grave Gap, 25 feet north of fork in road, west side of road, on ledge; chiseled square painted "U. S. B. M. 2069"	2,068.80
Street schoolhouse, 20 feet northeast of doorway, in rock; aluminum tablet stamped "1667 Va"	1,666.444
Street schoolhouse, about 1.1 miles north of, 100 feet north of ford, west side of road, in root of tree; copper nail with washer, painted "U. S. B. M. 1601"	1,600.89
Skeggs post office, about 1 mile south of, west side of road, in root of tree; copper nail with washer, painted "U. S. B. M. 1559"	1,558.29
Skeggs post office, center of road in front of; elevation painted "U. S. 1513"	1,512.7
Skeggs post office, about 1 mile north of, 175 feet south of Harvey Childress's house, 25 feet south of footbridge over Garden Fork, in ledge; aluminum tablet stamped "1440 Va"	1,439.325

Digitized by Google

	Feet.
Skeggs post office, about 2.5 miles north of, east side of road, in root of tree; copper nail with washer, painted "U. S. B. M. 1368"	1,368.13
Skeggs post office, about 3.5 miles north of, east side of road, in root of tree; copper nail with washer, painted "U. S. B. M. 1342"	1,342.03
Hanger post office, about 500 feet south of, on south bank of Levisa River, opposite private-road crossing, in ledge; aluminum tablet stamped "1300 Va"	1,300.142
Hanger post office, about 1.3 miles west of, north side of road, on ledge; chiseled square painted "U. S. B. M. 1259"	1,258.63
Hanger post office, about 2.7 miles west of, north side of road, on ledge; chiseled square painted "U. S. B. M. 1252"	1,252.08
Hanger post office, about 3.4 miles west of, 400 feet west of Jim Nicholl's house, south side of road, in ledge; aluminum tablet stamped "1187 Va"	1,187.110
Van Sant post office, about 2.9 miles east of, north side of road, on ledge; chiseled square painted "U. S. B. M. 1157"	1,156.85
Van Sant post office, about 1.8 miles east of, north side of road, on ledge; chiseled square painted "U. S. B. M. 1138"	1,137.28
Ratliff Chapel, in front of, in center of road; elevation painted "U. S. 1188"	1,188
Van Sant post office, about 350 feet south of, west side of Prater Creek, in ledge; aluminum tablet stamped "1114 Va"	1,113.876
Van Sant post office, about 0.8 mile south of, 20 feet north of fork in road, east side of road, in root of tree; copper nail with washer, painted "U. S. B. M. 1158"	1,157.24
Van Sant post office, about 1.8 miles south of, 25 feet north of fork in road, east side of road, on ledge; chiseled square painted "U. S. B. M. 1237"	1,236.57
Van Sant post office, about 2.7 miles south of, about 400 feet east of Stiltner's house, south side of road, in ledge; aluminum tablet stamped "1449 Va"	1,448.724
War Fork Gap, summit of, 15 feet north of road, in root of tree; nail painted "U. S. B. M. 1883"	1,882.57
War Fork Gap, about 1.4 miles west of, south side of road, in root of beech tree; copper nail with washer, painted "U. S. B. M. 1665"	1,664.82
War Fork Gap, about 2.1 miles west of, south side of road, at edge of creek, in ledge; aluminum tablet stamped "1575 Va"	1,574.712
Prater post office, about 0.25 mile west of, 8 feet south of road, on bank of Russell Prater Creek, on ledge; chiseled square painted "U. S. B. M. 1466"	1,465.28
Prater post office, about 1.4 miles west of, north side of road, in stump; copper nail with washer, painted "U. S. B. M. 1482"	1,481.24
Vicey post office, 200 feet east of, 20 feet north of road, in ledge; aluminum tablet stamped "1433 Va"	1,432.156
Vicey post office, about 1.1 miles west of, 12 feet south of road, in root of beech tree; copper nail with washer, painted "U. S. B. M. 1443"	1,442.34
From point 2 miles south of Colley south along highway to Bucu (spur leveled twice).	
Colley post office, about 3.4 miles south of, east side of road, in root of beech tree; copper nail with washer, painted "U. S. B. M. 1359"	1,359.32
Tiny post office, about 0.25 mile north of, 75 feet north of fork in road, east side of road, in ledge; aluminum tablet stamped "1438 Va"	1,437.976
Tiny, opposite old post-office building, in center of road	1,423.8
Tiny post office, about 1.2 miles south of, west side of road, in stump; copper nail with washer, painted "U. S. B. M. 1454"	1,454.14
Bucu post office, about 0.7 mile north of, east side of road, on ledge; chiseled square painted "U. S. B. M. 1581"	1,580.56
Bucu post office, about 0.25 mile north of, east side of road, in ledge; aluminum tablet stamped "1631 Va"	1,630.568

Digitized by Google

BURKES GARDEN QUADRANGLE.

[Latitude 37°–37° 15′; longitude 81° 15′–81° 30′.]

From milepost N 98 along Norfolk & Western Ry. to milepost N 82.

	Feet.
Milepost N 98; spike in base, aluminum tag marked "2405"	2,405.12
Milepost N 97; spike in base, aluminum tag marked "2433"	2,432.50
St. Clair, in front of station; top of rail	2,446.3
St. Clair, 0.5 mile west of station, 200 feet east of milepost 96, 20 feet north of track; aluminum tablet stamped "1 2468"	2,467.777
Milepost N 96; spike in base of, aluminum tag stamped "2508"	2,508.26
Milepost N 94; spike in base, aluminum tag stamped "2556"	2,555.95
Bailey, 270 feet east of station, 480 feet west of milepost N 93, 15 feet north of track, in rock; aluminum tablet stamped "2614 2"	2,613.94
Bailey, in front of station; top of rail	2,609.1
Milepost N 92; spike in base, aluminum tag stamped "2650"	2,649.98
Milepost N 91; spike in base, aluminum tag stamped "2699"	2,698.80
Tip Top, in front of station; top of rail	2,748.2
Tip Top, 850 feet west of, 20 feet south of track, in bowlder; aluminum tablet stamped "2757 3 1912"	2,756.789
Milepost N 89; spike in base, aluminum tag stamped "2727"	2,727.39
Milepost N 88; spike in base, aluminum tag stamped "2672"	2,671.77
Wittens Mill, 1.5 miles east of station, 0.2 mile west of milepost N 87, 10 feet south of railroad, in ledge; aluminum tablet stamped "2611 4 1912"	2,610.500
Milepost N 86; spike in base, aluminum tag stamped "2571"	2,571.25
Wittens Mill, in front of station; top of rail	2,536.8
Milepost N 85; spike in base, aluminum tag stamped "2515"	2,515.44
Five Oaks, in front of station; top of rail marked "2467"	2,472.5
Tazewell, 3 miles east of, 700 feet west of Five Oaks station, 20 feet north of track at milepost N 84, in rock; aluminum tablet stamped "2467 5 1912 B"	2,467.151
Milepost N 83; spike in base, aluminum tag stamped "2411"	2,411.37
Milepost N 82; spike in base, aluminum tag stamped "2391"	2,391.03

CLINTWOOD QUADRANGLE.

[Latitude 37°–37° 15′; longitude 82° 15′–82° 30′.]

From point 3 miles west of Clintwood east to point 1 mile north of Dante.

Clintwood, 2 miles west of, at junction of Coburn and Pound roads, on culvert on west edge of road; chisel point marked "1613 U. S."	1,613.11
Clintwood, on concrete stoop 15 feet west of door to courthouse; aluminum tablet stamped "1784 B 8 1912"	1,784.032
Clintwood, 0.7 mile southeast of, west edge of road at summit of hill; 2½-foot oak tree, scribed "1972 U. S."	1,971.76
Clintwood, 1.1 miles southeast of, at junction of roads; 4-foot chestnut tree, scribed "1829 U. S."	1,828.88
Clintwood, 2 miles southeast of, south edge of road; spike in base of 2½-foot white-oak tree, scribed "1547 U. S."	1,546.92
Clintwood, 2.6 miles southeast of, 50 feet west of Cranesnest River at ford, in slate ledge; aluminum tablet stamped "1440 B 9 1912"	1,439.862
Cranesnest Ford, 1.3 miles southeast of, south edge of road; spike in base of 1½-foot hickory tree, scribed "1622 U. S."	1,621.24
Summit of ridge between Cranesnest and McClure rivers, north edge of road, 100 feet west of top, in bowlder; aluminum tablet stamped "1925 B 10 1912"	1,924.764

Digitized by Google

	Feet.
Clintwood, 5.8 miles southeast of, 60 feet west of ford, 60 feet west of forks of road, south bank of McClure River; copper nail in root of 2½-foot sycamore tree, scribed and painted "1437 U. S."	1,436.42
Stratton, 2.8 miles north of, west edge of road, at base of oak tree; chisel point on bowlder, scribed on tree "1465 U. S."	1,464.69
Stratton, 1.8 miles north of, east edge of road, at north end of flat, in bowlder; aluminum tablet stamped "1486 B 11 1912"	1,485.965
Stratton, 400 feet north of post office, north edge of road; chisel point on bowlder, marked "1500 U. S."	1,499.45
Nora, 100 feet south of schoolhouse, 20 feet east of road, in bowlder; aluminum tablet stamped "1505 B 12 1912"	1,505.068
Nora, 1.2 miles southeast of, west edge of road; copper nail in base of 3-foot chestnut tree, scribed "1520 U. S."	1,519.80
Nora, 2.2 miles southeast of, west edge of road; chisel point on highest part of large bowlder, marked "1551 U. S."	1,551.00
Nora, 3.8 miles southeast of, 800 feet south of mouth of Honey Creek, east edge of road, in bowlder; aluminum tablet stamped "1616 B 13 1912"	1,615.936
Nora, 4.5 miles south of, 300 feet south of creek forks, west edge of road; copper nail in base of 2-foot oak tree, scribed "1654 U. S."	1,653.83
Nora, 5.4 miles south of, east edge of road, at point where road leaves creek; copper nail in sycamore tree, scribed "1727 U. S."	1,726.84
Nora, 5.9 miles south of, east edge of road, near east end of tunnel; copper nail in large white-oak stump, scribed "1877 U. S."	1,876.47
Dante, 1.5 miles north of, 100 feet south of summit of Trammel Gap, east edge of road; chisel point on bowlder, marked "2550 U. S."	2,550.06
Trammel Gap, 500 feet south of, south edge of road at switchback, in large bowlder; aluminum tablet stamped "2507 B 14 1912"	2,506.588
Dante, 1 mile north of, south edge of road; copper nail in base of 1-foot hickory tree, scribed "2193 U. S."	2,192.43

From Clintwood northeast along highway to Hayst.

Clintwood, in concrete stoop of courthouse, 15 feet west of door; aluminum tablet stamped "1784 B 8 1912"	1,784.032
Clintwood, 1.5 miles northeast of, 700 feet south of stream crossing, west side of road; chiseled square on rock ledge, marked "B. M. 1718"	1,717.43
Clintwood, 2.3 miles northeast of, south of road; chiseled square on rock bowlder, marked "B. M. 1809"	1,809.06
Clintwood, 3.2 miles northeast of, 200 feet south of stream crossing, 40 feet south of road, in rock ledge; bronze tablet stamped "1801 Va. 1912"	1,800.615
Clintwood, 3.9 miles northeast of, 50 feet northeast of road forks; nail in root of hickory tree, marked "B. M. 1870"	1,869.65
Clintwood, 4.9 miles northeast of, 25 feet northeast of road forks; nail in root of red-oak tree, marked "B. M. 1994"	1,994.12
Clintwood, 5.6 miles northeast of, 500 feet east of house, south of road, in outcrop of rock; aluminum tablet stamped "1789 Va. 1912"	1,788.740
Clintwood, 6.6 miles northeast of, 30 feet west of house, 100 feet north of road forks; chiseled square on outcrop rock, marked "B. M. 1856"	1,855.18
Tandy, 1 mile northeast of, 100 feet west of Cranes Nest River, at road crossing, in bowlder; aluminum tablet stamped "1304 Va. 1912"	1,303.947
Tandy, 1.7 miles northeast of, north of road; chiseled square on rock ledge, marked "B. M. 1577"	1,576.45
Tandy, 3.1 miles northeast of, 0.1 mile east of Watson Davis's house, south of road; nail in root of poplar tree, marked "B. M. 1820"	1,819.31
Tandy, 3.7 miles northeast of, 140 feet north of house north of road; chiseled square on outcrop ledge, marked "B. M. 1551"	1,550.73

Digitized by Google

	Feet.
Tandy, 4.2 miles northeast of, 100 feet northeast of Mount Olive Church, in triangle at road forks, in large bowlder; aluminum tablet stamped "1822 Va. 1912"	1,821.170
Tandy, 5.3 miles northeast of, 20 feet west of road forks; nail in root of large white-oak tree, marked "B. M. 1821"	1,820.24
Haysi, 50 feet east of; chiseled square on outcrop, marked "B. M. 1522"	1,521.46
Haysi, 0.4 mile east of, north of road, in rock ledge; aluminum tablet stamped "1381 Va. 1912"	1,380.432
Haysi, 0.7 mile east of, 500 feet north of road crossing of McClures River, 0.5 mile west of Mart; cut in base of hemlock tree, marked "B. M. 1288.58" (Carolina, Clinchfield & Ohio Ry. b. m.)	1,289.400

At point 2 miles north of Haysi and at Lonesome Branch (set from Carolina, Clinchfield & Ohio Ry. bench marks).

Carolina, Clinchfield & Ohio Ry. b. m., station 135, R. 581, residency No. 2, White Oak	1,234.07
Haysi, about 2.25 miles north of, 400 feet north of north end of railroad bridge, on bank of river, in ledge; bronze tablet not stamped	1,220.658
Carolina, Clinchfield & Ohio Ry. b. m., 70 feet R. 460+50 White Oak, residency No. 2, No. 16 b. m. in list of Elkhorn extension	1,178.67
Lonesome Branch, cement culvert over, east side of; bronze tablet not stamped	1,193.160

From Haysi southeast along highway to Colley.

Haysi, 0.4 mile east of, north side of road, in rock ledge; aluminum tablet stamped "1381 Va. 1912"	1,380.432
Haysi, about 1 mile east of, about 500 feet east of junction of Russell and Prater creeks, 6 feet east of Prater, on bank, in stump; copper nail with washer, painted "U. S. B. M. 1262"	1,262.34
Sand Lick (Birchleaf post office), about 1 mile northwest of, north side of road down Russells Fork, in root of tree; copper nail with washer, painted "U. S. B. M. 1270"	1,269.61
Sand Lick, at bend in road, opposite Jackson's store, east side of road, in sandstone ledge; aluminum tablet stamped "1287 Va"	1,287.126
Sand Lick, about 1.6 miles east of, 60 feet below wire footbridge at junction of Russell and Frying Pan creeks, in root of large chestnut tree; copper nail with washer, painted "U. S. B. M. 1280"	1,280.09
Colley post office, opposite, at foot of drain, in mulberry tree; copper nail with washer, painted "U. S. B. M. 1299"	1,298.50
Colley post office, about 1.5 miles south of, east side of road, in ledge; aluminum tablet stamped "1304 Va."	1,304.241
Colley post office, about 2 miles south of, 15 feet south of Priest Fork, west side of road, in large stump; copper nail with washer, painted "U. S. B. M. 1311"	1,310.99

From point near Vicey southwest along highway to Haysi.

Vicey post office, about 2.3 miles west of, south side of road, in root of tree; copper nail with washer, painted "U. S. B. M. 1387"	1,386.70
Mart post office, about 1.6 miles east of, 100 feet west of Doe Branch, north side of road, in ledge; aluminum tablet stamped "1377 Va"	1,376.434
Mart post office, about 0.5 mile east of, 60 feet south of fork in road, in stump; copper nail with washer, painted "U. S. B. M. 1353"	1,352.00
Mart post office, in front of, center of road; elevation painted "U. S. 1285"	1,285.

Digitized by Google

From point 1.7 miles north of Fullers Gap north along highway to point 2 miles west of Clintwood.

	Feet.
Fullers Gap, about 1.7 miles north of, east side of road, on bowlder; chiseled square	1,925.63
Tracys Fork, center of bridge over, painted erroneously "1626 W-8"	1,735.7
Fullers Gap, about 2.8 miles north of, about 600 feet north of iron bridge over Tracys Fork, east side of road, in culvert; bronze tablet stamped "1616 Va" (stamped erroneously)	1,726.311
Culvert at road east, painted erroneously "1584"	1,694.2
Steeles Fork, bridge over, 11 feet above water, floor of, painted erroneously "1525"	1,637.5
Carter's store, about 1.3 miles north of, west side of road, on culvert; chiseled square, painted erroneously "1454"	1,563.46
Lyons Fork, at road up, painted erroneously "1432"	1,541.9
Intersection of Coeburn-Clintwood and Wise-Clintwood roads, painted erroneously "1486"	1,595.4
Power's store, about 0.2 mile south of, east side of road, in culvert; bronze tablet stamped "1519 Va"	1,519.015
Cranes Nest River, near Mullin's house; surface of water	1,495.6
Power's store, about 1.1 miles north of, west side of road, on ledge; chiseled square painted "U. S. B. M. 1512"	1,511.29
Cranes Nest River, at junction of Lick Fork; surface of water	1,482.8
Foraker post office, about 1.2 miles north of, west side of road, in stump; copper nail with washer, painted "U. S. B. M. 1609"	1,608.43
Hibbitts Gap, summit of, center of road	1,796.8
Darwin post office, 150 feet west of Long Fork, at path leading to Mr. Grizzle's house, in rock, south side of road; bronze tablet stamped "1555 Va"	1,554.787
Darwin, at road crossing; surface of water in Long Fork	1,548.4
Darwin, about 1.2 miles north of, east side of road, in stump; copper nail with washer, painted "U. S. B. M. 1637"	1,636.58
Clintwood, 2.2 miles south of, 200 feet south of wooden bridge over Laurel Branch, east side of road, on rock; chiseled square painted "1622"	1,621.88

COEBURN QUADRANGLE.

[Latitude 36° 45′–37°; longitude 82° 15′–82° 30′.]

From Castlewood station along Norfolk & Western Ry. to milepost N 8.

Castlewood, in east end, south abutment of highway bridge over Clinch River; aluminum tablet stamped "1484 B 24 1912"	1,483.405
Milepost N 25; spike in base, marked "1485"	1,485.24
Milepost N 24; spike in base, marked "1481"	1,481.18
Fink, on southwest corner of south abutment of Norfolk & Western Ry. bridge over Lick Creek; chiseled cross (railroad elevation, 1,474.08 feet)	1,481.34
St. Paul, in sidewalk at west side of west basement window (south front) of St. Paul National Bank; aluminum tablet stamped "1488 25 B 1912"	1,487.783
St. Paul, 0.8 mile west of, in north end of west abutment of Norfolk & Western Ry. bridge 1390; aluminum tablet stamped "1521 B 26 1912"	1,520.708
Milepost N 21; spike in base, marked "1563"	1,562.50
Milepost N 20; spike in base, marked "1605"	1,604.75
Milepost N 19; spike in base, marked "1637"	1,637.20
Virginia City, 400 feet west of station, in rock in rear of tool house; aluminum tablet stamped "1688 B 27 1912"	1,687.981
Milepost N 17; spike in base, marked "1806"	1,805.58
Milepost N 16, about 200 feet east of, on north end of east abutment of bridge 1369; chiseled cross marked "1796"	1,795.98

Digitized by Google

	Feet.
Pine, 0.9 mile east of station, 330 feet west of milepost N 15, in north end of west abutment of railroad bridge; aluminum tablet stamped "1881 B 28 1912"	1,881.296
Milepost N 14; spike in base, marked "1962"	1,961.46
Pine, in front of station; top of rail	1,969.6
Milepost N 13; spike in base, marked "2038"	2,038.22
Milepost N 12; spike in base, marked "2013"	2,012.42
Coeburn, 0.6 mile east of, 900 feet east of milepost N 11, in northwest corner of stone culvert under railroad; aluminum tablet stamped "1994 B 29 1912"	1,994.086
Milepost N 10; spike in base, marked "1984"	1,984.32
Milepost N 9; spike in base, marked "1995"	1,994.89
Milepost N 8; spike in base, marked "2000"	2,000.31

From point near Dante south along Carolina, Clinchfield & Ohio Ry. to Fink.

Dante, 50 feet northeast of post office, in south end of west abutment of railroad bridge; aluminum tablet stamped "1765 B 15 1912"	1,764.148
Dante; southwest corner of bridge abutment (railroad elevation, 1,765.12 feet)	1,765.95
Dante, 0.8 mile south of, west edge of railroad; chisel point on bowlder	1,724.25
Dante, 1.4 miles south of; on southeast foundation of water tank; cross on plate, steel plate stamped "1700 U. S."	1,699.44
Milepost 44, 60 feet south of, in base of telephone pole; spike, aluminum tag stamped "1652 U. S."	1,652.02
Dante, 3.5 miles south of, 30 feet east of railroad, at road crossing, 700 feet south of Hamlin station, in granite cliff; aluminum tablet stamped "1623 B 15 1912"	1,623.009
Milepost 46, 140 feet north of, in northeast corner of trestle; copper nail, aluminum tag stamped "1580 U. S."	1,579.84
Milepost 47, 360 feet north of, west side of track, in base of telephone pole; spike, aluminum tag stamped "1512 U. S."	1,511.88
Fink, 1 mile east of St. Paul, on southwest corner of south abutment of Norfolk & Western Ry. bridge over Lick Creek; chiseled cross marked "1481" (railroad elevation, 1,474.08 feet)	1,481.34

From Coeburn north along highway to point 1.7 miles north of Fullers Gap.

Coeburn, about 1 mile south of Norfolk & Western Ry. abutment, east side of north end; aluminum tablet stamped "1994 Va"	1,994.086
Coeburn, Norfolk & Western Ry. station, main line; top of east rail	1,989.0
Bondtown, the Bondtown Mercantile Co. building, at northeast corner, in cement walk; chiseled square painted erroneously "1887"	1,996.63
Toms Creek, trestle over, 430 feet east of junction with branch to Toms Creek and Cranes Nest River, south side of track, in guardrail; copper nail with washer, painted erroneously "1890"	2,000.19
Fullers Gap, about 0.25 mile south of, on west side of new graded road, in culvert; bronze tablet stamped "2081 Va." NOTE.—Error of 110 feet in stamping.	2,190.880
Fullers Gap, summit of, center of road, painted erroneously "2202"	2,312.0
Fullers Gap, 0.5 mile north of, south side of culvert over Tracys Fork; chiseled square painted erroneously "2055"	2,165.39

Digitized by Google

GLADE SPRINGS QUADRANGLE.

[Latitude 36° 45′–37°; longitude 81° 45′–82°.]

From milepost 1 along highway to Old Rosedale.

	Feet.
Milepost 1; spike in base	1,832.89
Milepost 2; spike in base	1,803.72
Milepost 3; spike in base	1,818.76
Milepost 4; spike in base	1,817.20
Blackford, in central pier of highway bridge over Clinch River, in north end; aluminum tablet stamped "1811 B 1912"	1,811.350
Blackford, 1 mile south of, on east side of road opposite house; spike in post.	1,938.94
Blackford, 2 miles south of, north of road; chisel point on culvert	2,095.37
Blackford, 2.5 miles south of, west edge of road; spike in root of tree	2,286.76
Old Rosedale, 400 yards east of, 150 feet west of road north to Honaker, 8 feet north of road, in limestone ledge; aluminum tablet stamped "2281".	2,280.669

HAGAN QUADRANGLE.

[Latitude 36° 30′–36° 45′; longitude 83° 15′–83° 30′.]

From point 1 mile west of Hubbard Springs along Norfolk & Western Ry. to milepost N 59.

Hubbard Springs, 1 mile west of, 700 feet west of milepost N 43, in rock on south right of way line; aluminum tablet stamped "1625 B 46 1912"	1,624.719
Milepost N 44; spike in base marked "1647"	1,646.98
Milepost N 45; spike in base marked "1612"	1,582.22
Hogans, 75 feet northwest of northeast corner of station, in large rock on north side of road; aluminum tablet stamped "1525 B 47 1912"	1,524.705
Milepost N 47; spike in base marked "1573"	1,543.16
Milepost N 48; spike in base stamped "1634"	1,603.60
Rose Hill, 2 miles east of, 700 feet west of milepost N 49, in south end of east abutment of railroad bridge; aluminum tablet stamped "1604 B 48 1912"	1,574.050
Milepost N 50; spike in base not stamped	1,520.59
Milepost N 51, about 1,000 feet east of Rose Hill station; spike in base	1,455.94
Rose Hill, 1.5 miles west of, 2,400 feet east of milepost N 53; aluminum tablet stamped "1471 B 49 1912"	1,470.475
Milepost N 54; spike in base stamped "1414"	1,414.50
Enwing, 0.5 mile east of, 200 feet west of milepost N 55, in north end of east abutment of railroad bridge; aluminum tablet stamped "1397 B 50 1912"	1,397.523
Milepost N 56; spike in base marked "1386"	1,385.92
Milepost N 57; spike in base marked "1382"	1,381.95
Caylor, 1.3 miles east of, 1,200 feet west of milepost 58, in rock, 10 feet north of tracks, 100 feet east of crossing; aluminum tablet stamped "1390 B 51 1912"	1,390.148
Milepost N 59; spike in base marked "1366"	1,366.08

HANSONVILLE QUADRANGLE.

[Latitude 36° 45′–37°; longitude 82°–82° 15′.]

From milepost N 43 along Norfolk & Western Ry. to milepost N 27.

Milepost N 42; spike in base, marked "1612"	1,611.42
Finney, 0.5 mile west of, 200 feet west of milepost N 41, in large rock 20 feet south of track; aluminum tablet stamped "1583 B 19 1912"	1,583.029
Milepost N 40; spike in base, marked "1567"	1,567.28

Digitized by Google

	Feet.
Milepost N 39; spike in base, marked "1552"	1,551.76
Milepost N 38; spike in base, marked "1559"	1,559.32
Cleveland, 2.6 miles east of, 125 feet east of milepost N 37, in rock 10 feet south of track; aluminum tablet stamped "1555 B 20 1912"	1,555.057
Milepost N 36; spike in base, marked "1548"	1,547.60
Milepost N 35; spike in base, marked "1530"	1,530.22
Cleveland, in south end of east abutment of highway bridge over Clinch River; aluminum tablet stamped "1523 B 21 1912"	1,522.654
Milepost N 34; spike in base, marked "1525"	1,524.95
Milepost N 33; spike in base, marked "1524"	1,521.41
Kiser, at Francisco's store; sycamore stump (railroad elevation, 1,506.18 feet)	1,510.85
Kiser, 825 feet west of, on west end of south abutment of railroad bridge; aluminum tablet stamped "1514 B 22 1912"	1,513.614
Milepost N 31; spike in base, marked "1524"	1,524.19
Milepost N 30; spike in base, marked "1505"	1,505.29
Milepost N 29; spike in base, marked "1497"	1,496.87
Canterton, 2 miles west of, 1,225 feet west of milepost N 28, in stone 10 feet north of track; aluminum tablet stamped "1493 B 23 1912"	1,492.719
Milepost N 27; spike in base, marked "1504"	1,503.99

MIDDLESBORO QUADRANGLE (Virginia part).[1]

[Latitude 36° 30′–36° 45′; longitude 83° 30′–83° 45′.]

From milepost N 60 along Louisville & Nashville R. R. to milepost N 66.

Milepost N 60; spike in base, marked "1339"	1,338.46
Wheeler, 2 miles east of station, 300 feet west of milepost N 61, in rock 25 feet south of track; aluminum tablet stamped "1336 B 52 1912"	1,335.591
Milepost N 62; spike in base, marked "1303"	1,302.98
Wheeler, in front of station; top of rail	1,301.6
Wheeler, 0.3 mile southwest of station, 75 feet south of switch stand, in southeast corner of culvert; aluminum tablet stamped "1257 B 53 1912"	1,256.571
Milepost N 64; spike in base, marked "1267"	1,267.29
Milepost N 64, just east of overhead wagon bridge; spike in base, marked "1253"	1,252.50
Milepost N 66; spike in base, marked "1237"	1,236.34
Shawanee, 1.8 miles east of station, in top of Virginia-Tennessee State-line post on north right of way line of Louisville & Nashville R. R.; aluminum tablet stamped "1249 B 67 1912"	1,249.321

NOLANSBURG QUADRANGLE.

[Latitude 36° 45′–37°; longitude 83°–83° 15′.]

From milepost N 28 along Louisville & Nashville R. R. to Pennington station.

Milepost N 28; spike in base, marked "1423"	1,422.56
Milepost N 29; spike in base, marked "1362"	1,362.34
Pennington, 640 feet west of station, in rock 10 feet south of track; aluminum tablet stamped "1386 B 42 1912"	1,385.767

[1] For elevations in Kentucky in this quadrangle see Bulletin 554 and for those in Tennessee see Bulletin 441.

Digitized by Google

POUND QUADRANGLE.[1]

[Latitude 37°-37° 15′; longitude 82° 30′-82° 45′.]

From point 1 mile south of Glamorgan along Wise Terminal R. R. to Glamorgan, thence along highways to point 3 miles west of Clintwood.

	Feet.
Norton, 1.7 miles north of, 15 feet east of track; bowlder marked "2090"	2,089.91
Norton, 3.7 miles north of, 400 feet north of small switch, 15 feet west of track, on east bank of creek; 4-foot oak tree scribed and painted "2115"	2,114.35
Glamorgan, 1 mile south of, at south end of village, 300 feet south of switch, 25 feet west of track, 20 feet east of end of stone fence, in bowlder; aluminum tablet stamped "2183 B 1 1912"	2,183.235
Glamorgan, 100 feet south of, west edge of road; chisel point on concrete culvert, marked "2219"	2,218.63
Glamorgan, 0.8 mile north of, west edge of road; chisel point on concrete culvert, marked "2197"	2,196.38
Glamorgan, 1.5 miles north of, east edge of road, at switchback; chisel point on bowlder, marked "2320 U. S."	2,319.64
Glamorgan, 2 miles north of, summit of Indian Mountain, 40 feet east of road, in bowlder; aluminum tablet stamped "2483 B 2 1912"	2,483.268
Indian Mountain, 1.1 miles north of, west edge of road; chisel point on rock, marked "2154 U. S."	2,153.96
Indian Mountain, 2 miles north of, west edge of road, 50 feet north of J. Grit Freeman's mail box; chisel point on culvert, marked "1826"	1,825.55
Indian Mountain, 2.6 miles north of, at foot of long grade, west edge of road, west edge of north abutment of bridge over fork creek; chisel point, marked "1679"	1,678.79
Riner's farmhouse, 1 mile north of, west edge of road, in slate cliff 2 feet above road; aluminum tablet stamped "1638 B 3 1912"	1,637.633
Pound, 4.3 miles south of, east side of road; copper nail in 3-foot maple tree, marked "1640 U. S."	1,639.66
Pound, 3 miles south of, west bank of creek, west edge of road, where road crosses to east side of creek; copper nail in 2½-foot oak tree, marked "1608 U. S."	1,608.23
Pound, 2.7 miles south of, east edge of road, in top of culvert; aluminum tablet stamped "1606 B 4 1912"	1,605.395
Pound, 1.2 miles south of, 50 feet north of railroad crossing, 30 feet south of schoolhouse, 15 feet west of road; copper nail in base of walnut tree, marked "1596 U. S."	1,595.62
Pound, 1,000 feet north of station, east edge of road, in concrete culvert; aluminum tablet stamped "1547 B 5 1912"	1,546.452
Pound, 1.2 miles southeast of, 400 feet north of road forks, 200 feet north of store, west edge of road; copper nail in base of 2½-foot chestnut tree, scribed "1598 U. S."	1,597.40
Pound, 2.3 miles east of, 800 feet north of road forks, west edge of road, in base of 18-inch sycamore tree; copper bolt marked "1573 U. S."	1,572.89
Pound, 3.4 miles east of, 400 feet east of Mead farm house, south edge of road, in large bowlder under maple tree; aluminum tablet stamped "1646 B 6 1912"	1,645.478
Pound, 4 miles east of, north edge of road, near foot of steep grade; chisel point of large bowlder, marked "1771 U. S."	1,770.99
Pound, 5 miles east of, in gap at summit of ridge, east edge of road; copper nail in base of 1-foot black-oak tree, scribed "2156 U. S."	2,155.62

[1] For elevations in Kentucky in this quadrangle see Bulletin 554.

Digitized by Google

	Feet.
Summit of ridge, 0.7 mile east of, south edge of road; copper nail in base of 3-foot white-oak tree, scribed "1677 U. S."	1,677.06
Clintwood, 4 miles west of, 150 feet west of schoolhouse, 20 feet north of road, in bowlder; aluminum tablet stamped "1617 B 7 1912"	1,616.285
Clintwood, 3 miles west of, south edge of road; copper nail in base of 2½-foot white-oak tree, marked "1574 U. S."	1,573.44

From Pound Gap south along highway to Pound.

Pound Gap, summit of, 25 feet east of road, 50 feet south of house; chiseled square on ledge, marked "U. S. B. M. 2408"	2,407.43
Pound Gap, 1 mile south of, 60 feet west of Rocky Branch station, opposite shed, 8 feet east of stump, in ledge; aluminum tablet not stamped	1,940.812
Pound, 2.3 miles north of, 5 feet west of narrow-gage railroad; nail in root of beech tree, marked "U. S. B. M. 1598"	1,597.52

From Pound southwest along highway to Dewey (double spur).

Pound, 1,000 feet north of station, east edge of road, in concrete culvert; aluminum tablet stamped "1547 B 5 1912"	1,546.452
Pound, 1 mile west of, 250 feet west of road crossing, south of track; chiseled square on ledge, marked "B. M. 1557"	1,557.118
Pound, 3.1 miles west of, 150 feet east of white house, south of road; chiseled square on bowlder, marked "B. M. 1580"	1,579.79
Pound, 4 miles west of, 200 feet southeast of Glady Fork schoolhouse, south of road, in rock ledge; aluminum tablet stamped "1599 Va. 1912"	1,598.669
Pound, 5.7 miles west of, 50 feet southeast of road forks, north of road; chiseled square on rock ledge, marked "B. M. 1632"	1,632.07
Dewey, 600 feet north of, 8 feet west of road, 4 feet above road, in solid rock; aluminum tablet stamped "1693 Va"	1,692.418

At Lipps (double spur line from point near Norton).

Lipps, 0.5 mile south of, 20 feet west of road, opposite store, in sandstone rock; aluminum tablet stamped "2231 Va"	2,230.37

From Kentucky-Virginia State line along highways to Dewey.

Flat Gap, 570 feet east of post office, north end of stone culvert under highway, on top of; chiseled square marked "1919.3"	1,918.97
Flat Gap, 0.3 mile east of highway culvert over North Fork of Pound River, on top of north end of west concrete guardrail; chiseled square marked "1884.5"	1,884.17
Flat Gap, 1 mile east of, at road crossing on top of ridge between North and South forks of Pound River, at head of Meadow Branch, at top at north end of gap, 200 feet west of bend in road to south, north side of road, east side of gap, at fence corner, in root of 2-foot chestnut tree; copper nail marked "2116.5"	2,116.15
Dewey, 1.8 miles west of, at fork in road west up South Fork of Pound River, 200 feet east of greenhouse standing on north side of road, at mouth of hollow from north, on top of north end of stone culvert under road; chiseled square marked "1837.3"	1,836.98
Dewey, 1.4 miles west of, steel highway bridge over South Fork of Pound River, on west abutment, top of south wing wall; chiseled square marked "1764.6"	1,764.27

Near Carter's store (on line from Coeburn to Clintwood).

Carter's store, about 0.3 mile north of, near Flat Gap, east side of road, top of culvert; chiseled square painted erroneously "1499"	1,608.51

Digitized by Google

POUNDING MILL QUADRANGLE.

[Latitude 37°–37° 15′; longitude 81° 30′–81° 45′.]

From milepost N 82 along Norfolk & Western Ry. to milepost N 67.

	Feet.
Milepost N 81; spike in base, aluminum tag stamped "2382"	2,382.33
Tazewell, 700 feet east of station, railroad bridge over creek; chisel point on south end of east abutment, marked "2380"	2,379.90
Tazewell, 60 feet south of station, on south edge of road, in bowlder; aluminum tablet stamped "2386 B 6 Va. 1912"	2,385.811
Milepost N 80; spike in base, aluminum tag stamped "2376"	2,376.05
Milepost N 79; spike in base, aluminum tag stamped "2370"	2,370.30
Milepost N 78; spike in base, aluminum tag stamped "2365"	2,365.36
Pisgah, 150 feet west of tool house, 30 feet north of track, in bowlder; aluminum tablet stamped "2360 B 7 Va. 1912"	2,359.596
Milepost N 76, 40 feet west of, higher than track; spike in base of ledge, marked "2419"	2,418.72
Youngs station; spike in base of semaphore, aluminum tag stamped "2422"	2,422
Maxwell, 65 feet south of mail crane, 25 feet northeast of store, in bowlder; aluminum tablet stamped "2371 8 B 1912"	2,370.922
Milepost N 74; spike in base, aluminum tag stamped "2328"	2,327.51
Milepost N 73; spike in base, aluminum tag stamped "2304"	2,303.44
Pounding Mill, 3 miles east of, opposite milepost N 72, in south end of west abutment of bridge N 1334; aluminum tablet stamped "2262 B 9 1912"	2,262.364
Gillespie, in front of station; top of rail	2,259.8
Milepost N 71; spike in base, aluminum tag stamped "2229"	2,227.41
Milepost N 70; spike in base, aluminum tag stamped "2193"	2,191.34
Pounding Mill, in front of station; top of rail	2,157.6
Pounding Mill, 550 feet west of station, 10 feet south of track, in limestone at west end of rock cut; aluminum tablet stamped "2153 B 10 1912"	2,150.958
Milepost N 68; spike in base, marked "2117"	2,114.87
Milepost N 67; spike in base, marked "2078"	2,076.04

REGINA QUADRANGLE.[1]

[Latitude 37° 15′–37° 30′; longitude 82° 15′–82° 30′.]

Near The Towers (set from Carolina, Clinchfield & Ohio Ry. bench marks).

Carolina, Clinchfield & Ohio Ry. b. m., Maple, 50 feet to right of station, 330+80, residency No. 1 (last b. m., of list of Elkhorn extension)	1,143.42
The Towers, about 0.5 mile west of, 60 feet south of footbridge over Russells Fork, north side of track, in culvert; bronze tablet not stamped	1,128.210

RICHLANDS QUADRANGLE.

[Latitude 37°–37° 15′; longitude 81° 45′–82°.]

From milepost N 66 along Norfolk & Western Ry. to milepost N 45.

Milepost N 66; spike in base, marked "2032"	2,030.06
Cedar Bluff, in front of station; top of rail	2,001.2
Cedar Bluff, 720 feet west of station, 220 feet east of milepost N 65, railroad bridge over Clinch River, in north end of west abutment; aluminum tablet stamped "1996 B 11 1912"	1,993.648
Milepost N 64; spike in base, marked "1959"	1,957.04
Milepost N 63; spike in base, marked "1938"	1,935.72
Richlands, in front of station; top of rail	1,936.3

[1] For elevations in Kentucky in this quadrangle see Bulletin 554.

Digitized by Google

	Feet.
Richlands, 2,000 feet west of, in top of south end of west abutment of highway bridge over Clinch River; aluminum tablet stamped "1937 B 12 1912"	1,935.196
Milepost N 61; spike in base, marked "1927"	1,924.81
Milepost N 60; spike in base, marked "1920"	1,919.42
Raven, 280 feet east of station, in north end of west abutment of bridge 1358; aluminum tablet stamped "1909 B 13 1912"	1,909.247
Raven, in front of station; top of rail	1,910.9
Milepost N 58; spike in base, marked "1903"	1,902.70
Milepost N 57; spike in base, marked "1900"	1,899.98
Dan; spike in base of signboard, marked "1895"	1,894.59
Milepost N 55, 100 feet east of, in limestone 10 feet north of track; aluminum tablet stamped "1896 B 14 1912"	1,895.831
Milepost N 54, 200 feet east of; spike in base of "C" post, marked "1885"	1,884.71
Milepost N 53; spike in base, marked "1877"	1,876.52
Milepost N 52; spike in base, marked "1868"	1,867.53
Swords Creek, 0.6 mile east of, in front of Charles King's residence, in limestone 35 feet north of track; aluminum tablet stamped "1864 B 15 1912"	1,864.000
Milepost N 51; spike in base, marked "1867"	1,866.92
Swords Creek, in front of station; top of rail	1,867.8
Milepost N 50; spike in base, marked "1869"	1,869.20
Gardner, 80 feet east of station, in limestone 25 feet south of track; aluminum tablet stamped "B 16 1912"	1,913.040
Milepost N 48; spike in base, marked "1911"	1,911.05
Honaker, 0.6 mile east of, bridge 1461; bolt in north end of west guardrail	1,882.30
Honaker, in north face at northwest corner of public-school building; aluminum tablet stamped "1924 B 1912"	1,924.122
Honaker, 360 feet east of station, in limestone 70 feet north of track and north of stone culvert under railroad; aluminum tablet stamped "B 17 1912"	1,907.557
Milepost N 46, opposite Honaker station; spike in base	1,908.93
Milepost N 45; spike in base, marked "1853"	1,852.80

From point 0.6 mile east of Honaker to milepost 1.

Honaker, 0.6 mile east of, bridge 1461; bolt in north end of west guardrail	1,882.30
Milepost 1; spike in base	1,832.89

SNEEDVILLE QUADRANGLE.

[Latitude 36° 30′–36° 45′; longitude 83°–83° 15′.]

From milepost N 31 along Louisville & Nashville R. R. to milepost N 42.

Milepost N 31; spike in base, marked "1379"	1,379.33
Milepost N 32; spike in base, marked "1428"	1,427.96
Milepost N 33; spike in base, marked "1492"	1,491.60
Ben Hur, 600 feet east of, 15 feet south of track, in rock ledge; aluminum tablet stamped "1533 B 43 1912"	1,532.712
Milepost N 34, 1.5 miles west of Ben Hur; spike in base, marked "1615"	1,614.95
NOTE.—The post is painted "N 34" but should be "N 35."	
Milepost N 36; spike in base, marked "1680"	1,680.03
Ocoonita, 500 feet east of station, in north end of culvert under railroad; aluminum tablet stamped "1674 B 44 1912"	1,673.512
Milepost N 38; spike in base, marked "1630"	1,629.89
Milepost N 39; spike in base, marked "1600"	1,600.02
Hubbard Springs, 2 miles east of, 125 feet west of milepost N 40, in rock on north right of way line; aluminum tablet stamped "1556 B 45 1912"	1,555.549
Milepost N 41; spike in base, marked "1599"	1,599.18
Milepost N 42; spike in base, marked "1568"	1,568.05

Digitized by Google

WISE QUADRANGLE.

[Latitude 36° 45′–37°; longitude 82° 30′–82° 45′.]

From point 1 mile east of Norton along Norfolk & Western Ry. to Norton, thence along Louisville & Nashville R. R. to milepost N 6.

	Feet.
Tacoma, 1 mile east of, at northwest corner of yard to company store, in rock just outside of fence; aluminum tablet stamped "2000 B 30 1912".	2,000.628
Milepost N 7; spike in base, marked "1997"	1,997.27
Tacoma, in front of station; top of rail	2,000.6
Milepost N 6; spike in base, marked "1998"	1,998.63
Milepost N 5; spike in base, marked "2005"	2,005.50
Milepost N 4; spike in base, marked "2014"	2,014.94
Norton, 3.3 miles east of, in north end of second pier from east end of bridge 1405; aluminum tablet stamped "2043"	2,043.629
Milepost N 2; spike in base, marked "2081"	2,081.26
Milepost N 1; spike in base, marked "2101"	2,101.10
Norton, in front of station; top of rail	2,102.7
Norton, in stone step at front entrance to First National Bank building; aluminum tablet stamped "2135 B 32 1912"	2,135.121
Norton, 3,000 feet east of station, 75 feet west to Wise Terminal Junction; 18-inch hemlock tree (railroad elevation, 2101.96 feet)	2,101.13
Milepost N 2, L 288 C 116; spike in base, marked "2078"	2,077.82
Blackford, 1 mile east of, at milepost N 3, in rock 15 feet south of track; aluminum tablet stamped "2017 B 33 1912"	2,017.216
Milepost N 4; spike in base, marked "1952"	1,951.62
Milepost N 5; spike in base, marked "1890"	1,889.82
Blackford, 2 miles west of, 170 feet west of milepost N 6, in rock 30 feet south of track at east end of cut; aluminum tablet stamped "1827 B 34 1912"	1,826.764

From Norton along Wise Terminal R. R. to point 1 mile south of Glamorgan.

Norton, 1.7 miles north of, 15 feet east of track; chiseled mark on bowlder, marked "2090"	2,090.00
Norton, 3.7 miles north of, on east bank of creek, 400 feet north of small switch, 15 feet west of track; 4-foot oak tree, scribed and painted "2115".	2,114.40

From point 3.7 miles north of Norton north to Lipps (double spur line).

Norton, 4.5 miles north of, 4 feet west of road; chiseled square on top of concrete culvert, marked "2126"	2,125.97
Lipps, 1.5 miles south of, 75 feet north of road west, 6 feet west of road; chiseled square top of concrete culvert, marked "2157"	2,156.68

Peterstown quadrangle.

GILES COUNTY.

The elevations in the following list were determined by primary levels and accord with the 1912 adjustment. For elevations in West Virginia in this quadrangle see Bulletin 477.

The leveling was done in 1913, by H. S. Senseney.

Digitized by Google

PETERSTOWN QUADRANGLE.[1]

[Latitude 37° 15′–37° 30′; longitude 80° 45′–81°.]

From Peterstown, W. Va., southwest to Glenlyn, Va. (Virginia part of line from Mercers Salt Works, W. Va.).

	Feet.
Peterstown, 1.2 miles south of, south side of road, 10 feet east of gate, on rock; chiseled square	1,702.29
Rich Creek, 250 feet south of station, trestle over road, in west end of south abutment; bronze tablet stamped "1531"	1,530.497
Rich Creek, New River at ford; surface of water, Sept. 19, 1913	1,499
Lurich, in front of station; top of rail	1,535.5
Glenlyn, in front of station; top of rail	1,533
Glenlyn, 528 feet west of station, south side of track, in culvert; aluminum tablet stamped "1535"	1,535.109

[1] For the elevations in West Virginia in this quadrangle see Bulletin 477.

Digitized by Google

APPENDIX A

ELEVATIONS ADJUSTED BY THE COAST AND GEODETIC SURVEY FROM PRECISE LEVELING.

Bowling Green, Charles City, Doswell, Hampton, Mount Vernon, Newport News, Richmond, Stafford, Toano, Williamsburg, and Yorktown quadrangles.

CAROLINE, ELIZABETH CITY, FAIRFAX, HANOVER, HENRICO, JAMES CITY, NEW KENT, PRINCE WILLIAM, PITTSYLVANIA, STAFFORD, WARWICK, AND YORK COUNTIES.

The following descriptions and elevations are taken from reports of the Coast and Geodetic Survey and are republished by permission of the superintendent of that bureau. The bench marks were established by the Coast and Geodetic Survey and were included in the 1907 adjustment by that survey, and were not changed by the 1912 adjustment.

BOWLING GREEN QUADRANGLE.

[Latitude 38°-38° 15′; longitude 77° 15′-77° 30′.

From Penola to point near Summit.

	Feet.
Milford, in front of brick section house of Richmond, Fredericksburg & Potomac R. R., 100 yards north of railroad station, in ninth course above ground and in fifth brick north of front or east door; copper bolt (C. & G. S. b. m. K 1)	102.323
Guinea, 1 mile south of, in stone retaining wall to brick culvert, 100 meters north of milepost 48, on west side of track and north side of culvert, on third step from top, near center of exposed part of stone; bottom of roughly cut square hole (C. & G. S. b. m. I 2)	126.887
Summit, 0.5 mile south of, 200 meters south of milepost 53, on east side of track, in north stone of sandstone coping at end of brick culvert; bottom of square cut lettered "U. S.□B. M." (C. & G. S. b. m. I 1)	199.546

CHARLES CITY QUADRANGLE.

[Latitude 37° 15′-37° 30′; longitude 77°-77° 15′.]

From point near Lanexa to Roxbury.

Providence Forge, in north side of chimney at north end of Mr. Townsend's dwelling house, in eighth course of bricks from ground and in eighth brick north end of chimney; copper bolt (C. & G. S. b. m. Q)	32.144
Roxbury, in brick chimney at west end of T. L. Walker's residence, in tenth course of bricks from ground and in third brick from west side of chimney; copper bolt (C. & G. S. b. m. P 5)	42.830

DOSWELL QUADRANGLE.

[Latitude 37° 45′-38°; longitude 77° 15-77° 30′.]

From point near Doswell to Penola.

Doswell, 0.2 mile south of, at bridge 37 of Richmond, Fredericksburg & Potomac R. R., 1.2 miles below Chesapeake & Ohio Ry. junction, in southwest corner of south abutment of wooden bridge, 0.17 meter from extreme north edge of rock and 0.46 meter from extreme west edge; bottom of square cut (C. & G. S. b. m. M)	146.565

Digitized by Google

	Feet.
Rutherglen, in west wall of brick railroad section house, in twelfth course from ground and in third brick from northwest corner, in right side of wall as one enters door; cross in end of copper bolt (C. & G. S. b. m. K 3).....	205.127
Penola, in west face of brick chimney at back of house and store owned by Mrs. A. B. De Jarnett and facing railroad track, in seventeenth course above brick foundation to house and in second brick from northwest corner; copper bolt (C. & G. S. b. m. K 2).....	97.483

HAMPTON QUADRANGLE.

[Latitude 37°-37° 15′; longitude 76° 15′-76° 30′.]

From Old Point Comfort lighthouse to Newport News.

Old Point Comfort, on southwest side of lighthouse at Fort Monroe, in stone about 1.5 feet from ground, referenced by middle of lower horizontal edge of indenture; a figure /U. S. C. S.\ (C. & G. S. b. m. Old Tidal)..	9.630
Old Point Comfort, on southwest side of lighthouse at Fort Monroe, in stone directly beneath the Old Tidal b. m. and 0.215 meter above ground, 0.0125 meter in diameter and 0.055 meter in length; copper bolt (C. & G. S. b. m. U).....	8.817
Fort Monroe, on outer wall of fort, on right-hand side of postern gate, in second granite block from gate, in eleventh course of stone; cross cut (C. & G. S. b. m. Fort).....	11.049

At Morrison.

Morrison, in brick chimney of one-story frame house in yard of D. H. Jones's residence, on north side of chimney, in tenth course from ground and in second brick from outer or northeast corner; copper bolt (C. & G. S. b. m. R 3).....	32.392

MOUNT VERNON QUADRANGLE.

[Latitude 38° 30-39°; longitude 77°-77° 30′.]

From point near Widewater to point near Alexandria.

Quantico, in side wall of brick building owned by Max Lansburgh, opposite railroad station, east of track, in twelfth course above ground and in third brick from northwest corner; copper bolt (C. & G. S. b. m. G 5).....	35.222
Woodbridge, 0.5 mile north of, in top at northwest corner of large granite block set in red sandstone of first pier from north end of bridge over Occoquan River, under the end of iron superstructure, east of track; bottom of square (C. & G. S. b. m. G 4).....	68.746
Pohick Creek, north abutment of iron bridge of Richmond, Fredericksburg & Potomac R. R., east of track, southeast corner of abutment, in edge of capstone; surface of offset cut (C. & G. S. b. m. G 3).....	63.830
Accotink, 0.2 mile north of, in north abutment to small wooden railroad bridge (No. 20), west of track, on offset below top on which end of bridge rests; bottom of square cut (C. & G. S. b. m. G 2).....	82.126
Cameron Run, 3 miles west of Alexandria, in top of third step from top of north granite abutment to iron bridge of Baltimore & Potomac R. R., over Cameron Run, east of track; bottom of square hole, lettered "U. S. B. M." (C. & G. S. b. m. G 1).....	51.463
Alexandria, near middle of sill of northwest window of customhouse, 0.12 meter from extreme west edge of sill and 0.115 meter from extreme east edge; square mark (C. & G. S. b. m. G).....	46.740

Digitized by Google

NEWPORT NEWS QUADRANGLE.

[Latitude 36° 45′-37°; longitude 76° 15′-76° 30′.]

At Newport News.

	Feet.
Newport News, south side of Lafayette House, near middle of house, on stone doorsill, 0.055 meter from south edge of sill and 0.1663 meter from extreme west edge; bottom of square cut (C. & G. S. b. m. S)	22.357

RICHMOND QUADRANGLE.

[Latitude 37° 30′-37° 45′; longitude 77° 15′-77° 30′.]

From Richmond to Ashland.

Richmond, near north end of Richmond, Fredericksburg & Potomac R. R. freight station, on granite sill of second door on west side, 0.150 meter from extreme west edge of door and 0.654 meter from north side; bottom of square cut (C. & G. S. b. m. O)	190.930
Laurel, reform school, in granite sill of south door on east side of brick workshop, on upper (outer) edge of sill, 0.15 meter from south end; bottom of square cut (C. & G. S. b. m. N_1)	219.374
Ashland, southeast door of Duncan Memorial Chapel adjoining Randolph-Macon College, 0.15 meter from south edge of sill, 0.155 meter from east side of brick wall, 0.184 meter from door jamb; bottom of square cut in sill (C. & G. S. b. m. N)	221.170

In Richmond and vicinity.

Richmond, 1.5 miles east of, top of stone coping to brick culvert under Chesapeake & Ohio R. R., 140 meters east of milepost 81, on south end of culvert and on eastern or largest stone of coping on raised part of culvert; bottom of square hole lettered "U. S. □ B. M." (C. & G. S. b. m. P 4)	112.405
Richmond, corner of Seventeenth Street and Winston Alley, brick building owned by Davenport & Morris and occupied by the Union Brokerage Commission & Warehouse Co., at northeast corner of building and nearly on level with pavement, top of stone door and window sill (on which iron columns in front of building rest); bottom of square cut, lettered "U. S. C. & G. S. □ B. M." (C. & G. S. b. m. P 3)	19.625
Richmond, corner of Seventeenth and Dock streets, on front of brick building owned and occupied by Davenport & Morris, in granite sill of window at right-hand corner (as one faces the front of building); cross cut, lettered "U.S.C. & G. S.+B.M." (C. & G. S. b. m. P 2)	22.066
Richmond, flat surface of an offset on granite base to lamppost on left of steps leading to west entrance to new city hall (C. & G. S. b. m. New City Hall)	164.183
Richmond, at head of Grace Street, in granite sill of east front door of Richmond College, near south end of sill, 0.142 meter from extreme east edge of sill and 0.174 meter from south edge of door; bottom of square cut (C. & G. S. b. m. P)	205.883
Richmond, at intersection of Poplar and Ash streets, in side of stone post 15 by 15 inches, iron plate facing river and inscribed "High-water line, 24 feet 1.8 inches above ordinary high tide, Oct. 1, 1870;" middle line of raised horizontal arrow on plate (C. & G. S. b. m. city b. m.)	25.485

Digitized by Google

STAFFORD QUADRANGLE.

[Latitude 38° 30′–38° 45′; longitude 77° 15′–77° 30′.]

From point near Summit to point near Widewater.

	Feet.
Fredericksburg, in sill of Princess Anne Street door to library in courthouse, near northwest corner of building, 0.051 meter from extreme east edge of sill and 0.11 meter from south side of door; bottom of square cut (C. & G. S. b. m. I)	69.066
Fredericksburg, bridge of Richmond, Fredericksburg & Potomac R. R. over Rappahannock River, in northwest corner of stone coping of west abutment, below top of abutment and 0.181 meter from extreme east edge of stone in which it is cut, 0.056 meter from extreme north edge, 0.084 meter from abutment wall; bottom of square cut (C. & G. S. b. m. H)	43.073
Potomac Run station, near, in north stone abutment of iron railroad bridge over Potomac Run, west of track and at end of ironwork of bridge; bottom of square cut (C. & G. S. b. m. G 8)	84.993
Brooke, a short distance south of station, in top of sandstone coping to retaining wall of brick culvert under railroad, east of track, near south end of wall above the arch; bottom of square cut, lettered "U.S. □ B.M." (C. & G. S. b. m. G 7)	58.919
Widewater, 0.5 mile south of, in top of retaining wall to brick culvert under railroad, east of track and near north end of wall above the arch; bottom of square cut, lettered "U. S. □ B. M." (C. & G. S. b. m. G 6)	7.373

TOANO QUADRANGLE.

[Latitude 37° 15′–37° 30′; longitude 76° 45′–77°.]

From Williamsburg to Lanexa.

Toano, in top of brick foundation under railroad water tank, in top of third sill from track, 3.5 inches from west end and 2 inches from north side of foundation; bottom of square cut (C. & G. S. b. m. Q 4)	101.143
Diascond, in brick chimney of frame dwelling house owned by John Gordon and occupied by J. C. Glasebrook, in east side of chimney in eleventh course of bricks above ground, in third brick from northeast corner; copper bolt (C. & G. S. b. m. Q 3)	44.431
Lanexa, near, in top of raised part of brick culvert under Chesapeake & Ohio Ry. just above station, at north end of culvert and 0.5 meter from its west side; bottom of square cut, lettered "U. S. □ B. M." (C. & G. S. b. m. Q 2)	7.676

WILLIAMSBURG QUADRANGLE.

[Latitude 37° 15′–37° 30′; longitude 76° 30′–76° 45′.]

At Williamsburg.

Williamsburg, north side of courthouse near east end, in eleventh layer of bricks above watershed of building, in third brick from corner of north wing; copper bolt 0.058 meter long and 0.0125 meter in diameter (C. & G. S. b. m. R)	88.884

YORKTOWN QUADRANGLE.

[Latitude 37°–37° 15′; longitude 76° 30′–76° 45′.]

At Lee Hall.

Lee Hall, in west wall of two-story brick outhouse in yard of E. C. Madison's residence, in seventh course above ground and in third brick from southwest corner; copper bolt (C. & G. S. b. m. R 2)	63.921

Digitized by Google

APPENDIX B.

SECONDARY ELEVATIONS.

Secondary elevations from records and topographic maps of the United States Geological Survey, including altitudes of well-known summits and other useful elevations, are given below. These elevations are approximate only and should not be used for accurate work.

Name or locality.	Quadrangle.	County.	Elevation.
			Feet.
Abners Knob	Christiansburg	Montgomery	2,838
Adams Peak	Lexington	Rockbridge	2,990
Ad Cox Knob	Natural Bridge special.	Botetourt-Rockbridge.	3,488
Amelia	Amelia	Amelia	358
Angels Rest	Dublin	Giles	3,600
Apple Orchard Mountain	Natural Bridge special.	Bedford-Botetourt	4,224
Arnolds Knob	Christiansburg	Craig, Va.-Monroe, W. Va.	3,929
Ashburn	Seneca	Loudoun	280
Back Creek Mountain	Natural Bridge special.	Botetourt	2,789
Bald Knob	Dublin	Giles	4,348
Do	Staunton	Augusta	4,410
Bald Knob triangulation station	Natural Bridge	Bath	4,245
Bangs	Christiansburg	Montgomery	2,007
Barbett Knob	Hillsville	Carroll	3,034
Beamer Knob	do	do	3,400
Beartown Mountain	Abingdon	Russell	4,604
Bear Wallow triangulation station	Tazewell	Buchanan - Tazewell, Va., and McDowell, W. Va.	3,170
Bedford Springs	Lynchburg	Campbell	800
Berryville	Harpers Ferry	Clarke	571
Big Bend triangulation station	Pocahontas	Bland-Wythe	4,000
Big Butt	Grundy	Buchanan-Russell	3,701
Big House Mountain	Natural Bridge	Rockbridge	3,612
Big Knob	Estillville	Scott	3,217
Blacksburg	Christiansburg	Montgomery	2,170
Blackstone	Amelia	Nottoway	432
Bland	Pocahontas	Bland	2,470
Bluff Mountain	Lexington	Amherst-Rockbridge	3,350
Bremo Bluff	Palmyra	Fluvanna	234
Briar Patch Mountain	Wytheville	Grayson	3,650
Buck Mountain	Roanoke	Roanoke	1,992
Do	Wytheville	Grayson	4,680
Burkeville	Farmville	Nottoway	523
Butt Mountain	Dublin	Giles	4,195
Camp Mountain	Natural Bridge special.	Botecourt-Rockbridge	3,318
Cartersville	Palmyra	Cumberland	263
Cartmell Gap	Natural Bridge special.	Botetourt	1,986
Central	Dublin	Pulaski	1,785
Ceres	Pocahontas	Bland	2,760
Chalk Mine Mountain	Lexington	Rockbridge	2,960
Chester	Bermuda Hundred	Chesterfield	146
Chesterfield	Amelia	do	206
Chisel Knob	Hillsville	Carroll	3,065
Christiansburg	Christiansburg	Montgomery	2,090
Clinch Mountain	Pocahontas	Tazewell	4,724
Clinch triangulation station	Bristol	Washington	4,223
Clintwood	Grundy	Dickinson	1,800
Coeburn	Bristol	Wise	1,981
Coles Knob	Christiansburg	Floyd	2,903
Columbia	Palmyra	Fluvanna	206
Comer Rock	Wytheville	Grayson-Wythe	4,113
Cove Mountain	Natural Bridge special.	Botetourt	2,073
Davis Knob	Hillsville	Grayson	3,020
Dinwiddie	Amelia	Dinwiddie	267
Drummond Lake, water surface	Norfolk	Nansemond-Norfolk	22
Elk Garden Ridge	Abington	Russell	3,250
Elk Knob	Estillville	Lee	3,243
Elliott Knob triangulation station	Staunton	Augusta	4,473

Digitized by Google

Name or locality.	Quadrangle.	County.	Elevation.
			Feet.
Evergreen	Appomattox	Appomattox	730
Evington	Lynchburg	Campbell	724
Farmville	Farmville	Prince Edward	316
Felt Knob	Hillsville	Carroll	3,216
Fincastle	Roanoke	Botetourt	1,250
Flattop triangulation station	do	Bedford-Botetourt	4,001
Floyd Mountain	Natural Bridge special	Botetourt	3,149
Fort Lewis Mountain	Christiansburg	Roanoke	3,328
Foster Knob	Roanoke	Bedford	2,576
Fuller Gap	Bristol	Wise	2,305
Gibson Knob	Hillsville	Carroll	3,336
Goode	Lynchburg	Bedford	728
Grassy Hill	Roanoke	Franklin	1,968
Grassy Mountain	Natural Bridge special	Botetourt-Rockbridge	3,358
Gravel Hill	Palmyra	Buckingham	458
Greens Knob	Roanoke	Bedford	2,563
Grundy	Grundy	Buchanan	1,065
Gully Mountain	Natural Bridge special	Botetourt	3,509
Hamilton Knob	Hillsville	Wythe	3,163
Hampden Sidney	Farmville	Prince Edward	539
Hawks Bill	Luray	Madison-Page	4,066
Hayter Knob	Abingdon	Russell-Washington	4,200
Headforemost Mountain	Roanoke	Bedford	3,779
Hickory Knob	Lewisburg	Alleghany, Va.-Greenbrier, W. Va.	3,351
Highco Mountain	Lexington	Amherst-Rockbridge	2,880
High Knob	Estillville	Wise	4,188
Do	Luray	Fauquier-Warren	2,385
High Point	Dublin	Giles	3,910
High Rock	do	Bland-Wythe	3,837
High Rocks	Wytheville	Wythe	3,660
Hillsville	Hillsville	Carroll	2,570
Humpback Mountain	Buckingham	Augusta-Albemarle	3,645
Jump Rock	Lexington	Rockbridge	3,190
Keysville	Farmville	Charlotte	625
Lebanon	Bristol	Russell	2,131
Leesburg	Harpers Ferry	Loudoun	321
Leigh Mountain	Farmville	Prince Edward	715
Lick Mountain	Lewisburg	Alleghany	2,990
Little House Mountain	Natural Bridge	Rockbridge	3,410
Lookout Mountain	Wytheville	Grayson	4,623
Lynch	Lynchburg	Campbell	730
Lynville Mountain	Roanoke	Franklin	2,280
McAfee Knob	Christiansburg	Roanoke	3,201
Macks Mountain	Hillsville	Pulaski	3,404
Marleys Top	Abingdon	Smyth	3,290
Marys Rock	Luray	Page-Rappahannock	3,523
Mason Knob	Christiansburg	Franklin-Roanoke	3,217
Max Meadows	Hillsville	Wythe	2,028
Mays Mountain	do	do	2,849
Meherrin	Farmville	Lunenburg	589
Middletown	Winchester	Frederick	660
Mills Mountain	Roanoke	Botetourt-Roanoke	2,366
Montross	Montross	Westmoreland	138
Morris Knob triangulation station	Tazewell	Tazewell	4,510
Mount Pleasant	Lexington	Amherst	4,098
Nebraska	Appomattox	Appomattox	825
Newbern	Dublin	Pulaski	2,066
New River depot	do	do	1,757
Nicholls Knob	Lewisburg	Alleghany	3,573
Nottoway	Farmville	Nottoway	421
Oldtown	Hillsville	Grayson	2,485
Onion Mountain	Roanoke	Bedford	3,828
Orebank Mountain	Natural Bridge special	Botetourt	3,456
Pamplin	Appomattox	Appomattox	678
Paris Mountain	Christiansburg	Montgomery	3,040
Peak Creek knob	Dublin	Pulaski	3,374
Peak triangulation station	Tazewell	Tazewell	4,230
Pilot Knob	Hillsville	Grayson	3,021
Pine Mountain	Natural Bridge special	Botetourt	2,226
Poor Mountain	Christiansburg	Roanoke	3,960
Pope Knob	Hillsville	Carroll	3,039
Poplar Camp Mountain	do	do	3,161
Poplar Knob	do	do	3,166
Potts Mountain	Lewisburg	Craig, Va.-Monroe, W. Va.	3,829
Purcell Knob	Antietam	Loudoun	1,387
Purcellville	Harpers Ferry	do	553
Purgatory Mountain	Natural Bridge special	Botetourt	3,037
Queensberry Knob	Hillsville	Carroll	2,935
Queens Knob	Wytheville	Wythe	3,204
Ragged Mountain	Luray	Madison	3,398
Redrock Mountain triangulation station	Abingdon	Russell-Smyth	4,434

Digitized by Google

Name or locality.	Quadrangle.	County.	Elevation.
			Feet.
Rich Mountain	Hillsville	Carroll-Patrick	3,551
Rogers Mountain triangulation station, highest point in State yet determined	Abingdon	Grayson-Smyth	5,719
Round Hill	Harpers Ferry	Loudoun	558
Round Top	Lexington	Augusta-Nelson	3,430
Rustburg	Lynchburg	Campbell	897
Ryan	Seneca	Loudoun	297
Salem	Christiansburg	Roanoke	1,006
Scottsville	Palmyra	Fluvanna	275
Scurrf Mountain	Natural Bridge special	Botetourt	2,521
Sharon Springs	Pocahontas	Bland	2,760
Sharptop	Abingdon	Smyth	4,600
Short Hill	Antietam	Loudoun	1,489
Short Hills triangulation station	Natural Bridge special	Rockbridge	2,911
Sinking Creek Mountain	Christiansburg	Craig	3,561
Smith Mountain	Roanoke	Pittsylvania	2,043
Southwest Peak of Otter	do	Bedford	3,875
Stampingground Mountain	Natural Bridge special	Botetourt	2,755
Staunton River	Lynchburg	Pittsylvania	560
Stewarts Knob	Roanoke	Botetourt - Bedford - Roanoke.	2,472
Stocker Knob	Estillville	Lee	2,926
Stony Man	Luray	Madison-Page	4,031
Sugarloaf Mountain triangulation station	Natural Bridge special	Botetourt	3,633
Taylors Mountain	Roanoke	Bedford	2,555
The Knob	Natural Bridge special	Botetourt	2,682
The Priest	Lexington	Nelson	4,080
Thornton Gap	Luray	Page-Rappahannock	2,279
Tinker Mountain	Roanoke	Botetourt	3,029
Tiptop	Pocahontas	Tazewell	2,758
Tobacco Row triangulation station	Lexington	Amherst	2,938
Trammel Gap	Bristol	Dickenson-Russell	2,450
Twelve O'Clock Knob	Christiansburg	Roanoke	2,707
Weaver Knob	Roanoke	Bedford	2,615
Wenonah	Dublin	Giles	1,559
Whiterock Mountain	Abingdon	Russell-Smyth - Tazewell.	4,550
White Rocks triangulation station	Jonesville	Lee, Va.-Harlan, Ky.	3,451
Whitetop Mountain triangulation station	Abingdon	Grayson-Smyth	5,520
Wigginton Knob	Roanoke	Bedford	2,461
Wildcat Mountain	Natural Bridge special	Botetourt	3,024
Willis Mountain	Farmville	Buckingham	1,159
Wilson Mountain	Natural Bridge special	Rockbridge	2,054
Winchester	Winchester	Frederick	717
Winterpock	Amelia	Chesterfield	207
Witcher Knob	Hillsville	Carroll	2,912
Yellow Mountain	Roanoke	Roanoke	2,191

Digitized by Google

INDEX.

A. Page.

Abbyville 26
Abingdon 38
Abingdon quadrangle 38–41
Accomac County 14
Accotink 59
Ajax 29
Alexandria 21, 22, 59
Alleghany 13
Alleghany County 8
Alpine 34
Appalachia 42
Antietam quadrangle 36
Archer, S. R., work of 41
Arnold, C. W., work of 41
Ashland 60

B.

Backbone 13
Bacons Castle 19
Bailey 45
Baileys Crossroads 22
Baldwin, D. H., work of 17
Baldwin 12
Baron 38
Bassett 9
Battery Park 16
Beatrice 26
Bee 43
Belfast Mills 41
Ben Hur 55
Bench marks, description of 6
plate showing 5
Bessemer 33, 34
Big Stone Gap 42
Big Stone Gap quadrangle 41–42
Biggs, L. F., work of 41
Birchleaf 47
Blackford 50, 56
Bondtown 49
Bonsacks quadrangle 10–11, 31
Boones Mills 10
Botetourt County 8, 31
Bowling Green quadrangle 58
Boydton quadrangle 30
Braddock 22
Braddock Heights 22
Bramwell quadrangle 13, 36–37, 42
Broad Ford 40
Brooke 61
Brookneal 30
Brookneal quadrangle 30
Buchanan 11, 34, 35
Bucu 44
Bucu quadrangle 42–44
Buffalo Junction 26
Bull Run 18, 20

Page.

Burke 22
Burkes 19
Burkes Garden quadrangle 45
Burketons 12

C.

Cahas Mountain quadrangle 10, 29–30
Callaghan 13
Callaghan quadrangle 13
Callands quadrangle 29
Campbell, N. A., work of 8
Campbell County 25
Canterton 51
Carolina, Clinchfield & Ohio Ry 47, 49, 54
Caroline County 58
Castlewood 48
Caylor 50
Cedar Bluff 54
Chain Bridge 23
Chantilly 18
Charles City quadrangle 58
Charlotte County 25
Chatham Hill 46
Chatham quadrangle 28–29
Cherrydale 25
Cherrydale Heights 24
Chesapeake & Ohio Ry 8, 12, 13, 15, 16, 33, 34
Chilhowie 39
Christie 30
Clark 23
Clarksville 8, 9, 25, 26, 30
Clarksville Junction 26
Clarksville quadrangle 8–9, 25–26
Clarkton 27
Cleveland 51
Clifton 19
Clifton Forge 12
Clifton Forge quadrangle 12
Clintwood 45, 46, 48, 53
Clintwood quadrangle 45–48
Clover 27
Clover quadrangle 26–27
Cloverdale 11
Cluster Springs 31
Coast and Geodetic Survey, elevations by 58–61
Coeburn 49
Coeburn quadrangle 48–49
Colley 43, 44, 47
Covington 12, 13
Craig County 31
Craig Valley R. R 31, 33
Craigs Creek quadrangle 31–32
Croaker 14, 15
Crystal Hill 27
Cumberland Gap 37

Digitized by Google

D. Page.
Damascus 38,39
Damascus quadrangle 38
Dan 55
Dante 46,49
Darwin 48
Daysville 21
Deel 43
Deemer, R. S., work of 14,31
Deerwood Ford 29
Delray 22
Denbigh 15
Denniston 30
Dewey 53
Diascond 61
Dickenson County 41
Dillon 34
Dominion Heights 25
Doswell 58
Doswell quadrangle 58-59
Dranesville 21
Dryden 42
Dunn Loring 21

E.
Eagle Rock 12,33,34
Eagle Rock quadrangle 12,32,34
East Alleghany 13
East Arlington 23
East Falls Church 24
Edsalls 22
Elba 28
Elizabeth City County 58
Emory 39
Ewing 50

F.
Fairfax County 17,58
Fairfax Courthouse 17,18
Fairfax quadrangle 17-19
Falls Church 22,24
Falls Mills 36
Farmer, R. A., work of 17
Farmers 28
Ferrum 9,10
Fincastle 31,32,33
Fink 48,49
Finney 50
Five Oaks 45
Flat Gap 53
Foraker 48
Forestville 17
Fort Monroe 59
Foust, F. L., work by 37
Franklin City 14
Franklin County 8
Fredericksburg 61
Furnace 42

G.
Gala 12,35
Gardner 55
Giles County 13,56
Gillespie 54
Gilmore Mills 34,35
Given 32,34
Glade Hill 29
Glade Springs quadrangle 38,50

Page.
Glamorgan 52
Glenlyn 13,57
Glen Wilton 12
Gloucester 15
Gloucester County 14
Gloucester Point 15
Grafton 16
Graham 13,36,37,42
Grayson County 38
Green, T. A., work of 13,14,31,36
Grove 15
Guinea 58

H.
Haden 12
Halbert, E. O., work of 25
Halifax County 25
Hallwood quadrangle 14
Hampton 16
Hampton quadrangle 16,59
Hanger 44
Hanover County 58
Hansonville quadrangle 50-51
Harpers Ferry 36
Haymarket quadrangle 20
Haysi 47
Hayter Gap 40,41
Hebron Church 31,32
Henrico County 58
Henry 9
Henry County 8
Highgate 16
Highview Park 24
Hipes 34
Hodges, J. W., work of 14
Hogans 50
Hollins 11
Honaker 42,55
Horton, A. H., work of 25
Houston 27,31
Hubbard Springs 50,55
Hurt 28

I.
Ilda 17,19,21
Indian Head quadrangle 20
Indian Rock 34
Iron Gate 12
Isle of Wight County 14
Isle of Wight quadrangle 16

J.
James City County 14,58
Jamestown 16
Jerrys Run 13

K.
Kanawha & Michigan Ry 8
Kenmore 17
Kings Corners 16
Kiser 51
Konnarock 38,39

L.
Lanexa 61
Langley 23
Laurel 60

Digitized by Google

Page.
Laurel Ry. 38
Lee Chapel 19,20
Lee County 37,41
Lee Hall 15,61
Lennig 27
Level Run 28
Lewinsville 24
Libbey, R. L., work of 8,25
Lick Run 12
Lincolnia 22
Lipps 53,56
Lithia 11
Livingstone Heights 24
Lloyd 22
Long Bridge 23
Longwood 35
Loudoun County 17,35
Louisville & Nashville R. R. 37,41,51,55,56
Lovettsville 36
Lowmoor 12
Lurich 57
Lynchburg quadrangle 28

M.

McLean 23,24
McMaugh, F. J., work of 17
Mahala 21
Mallow 12
Manassas 19,20
Maps, topographic, list of 7-8
Marion 39,40
Marion quadrangle 38
Mart 47
Martinsville 9
Martinsville quadrangle 9
Massey 14
Maxwell 54
Mayo 30
Meadow View 38
Mecklenburg County 8,25
Merrifield 21
Metcalfe, J. B., work of 17,38,41
Middlesboro quadrangle 37,51
Milford 58
Moneta quadrangle 29
Moores Place 16
Morrison 59
Moss Run 13
Motley 28
Mount Ida 23
Mount Rogers quadrangle 38
Mount Vernon quadrangle 59
Murat 35

N.

Nace 11
Nathalie 27
Nathalie quadrangle 27
Natural Bridge 35
Natural Bridge quadrangle 11,34-35
Neathery 27
Neersville 36
Nelson 26
Nemours, W. Va 37
New Kent County 58
Newport News 16,60
Newport News quadrangle 60

Page.
Noland 27
Nolansburg quadrangle 51
Nora 46
Norfolk & Western Ry 8,9,10,11,13,27,30,36,37,38,42,45,48,49,50,54,56
North Newport News 16
Norton 52,56
Novelty 29

O.

Oakdale 35
Oaktree 15
Occoonita 55
Ohlinger 42
Old Point Comfort 16,59
Old Rosedale 41,50
Ordinary 15
Oriskany 34

P.

Parr 34
Penhook 29
Pennington 42.51
Penola 58,59
Personnel, record of 5
Perth 28,30
Peterstown, W. Va 57
Peterstown quadrangle 13,57
Pine 49
Pinnacle 33
Pisgah 54
Pittsville 28
Pittsylvania County 25,58
Pleasant Valley 18
Pocahontas 37
Pocomoke City 14
Pohick Creek 20,59
Potomac Run 61
Pound 52,53
Pound quadrangle 52-53
Pounding Mill 54
Pounding Mill quadrangle 54
Prater 44
Precise leveling, definition of 5-6
Primary leveling, definition of 5-6
Prince William County 17,58
Providence Forge 58
Publication, previous 5

Q.

Quantico 59

R.

Randolph 26,27
Rapps Mill 35
Raven 55
Ravensworth 22
Redwood 29
Regina quadrangle 54
Rich Creek 57
Richlands 54,55
Richlands quadrangle 54-55
Richmond 60
Richmond, Fredericksburg & Potomac R. R 22,59,60,61
Richmond quadrangle 60
Ridgeway 9

Digitized by Google

Page.
Roanoke 10, 11
Roanoke County 8
Rockbridge County 31
Rocky Mount 10, 30
Rocky Mount quadrangle 9–10
Rocky Point 34
Rose Hill 50
Rosedale 41
Rosslyn 23, 25
Roxbury 58
Russell County 38, 41
Rutherglen 59

S.

St. Asaph 23
St. Clair 45
St. Elmo 23
St. Paul 48
Salisbury 12
Saltpetre Cave 11
Saltville 40
Sand Lick 47
Sandy Level 29
Sassafras 15
Scotland 16
Scottsburg 27, 31
Sea level, mean, definition of 6–7
Secondary elevations 62–64
Seminary 22
Semper, C. H., work of 8, 13
Seneca quadrangle 20–21
Senseney, H. S., work of 31, 41, 56
Septa 15
Shawanee 51
Sideburn 19
Signpine 15
Skeggs 43, 44
Smithfield 16
Smyth County 38
Sneedville quadrangle 55
Snow Hill quadrangle 14
Soudan 8
South Boston 31
South Clarksville 26
Southern Ry 8, 22, 26, 27, 28, 29, 30, 31
Springfield (Washington quadrangle) 22
Springfield (Yorktown quadrangle) 15, 16
Springwood 11, 32
Stafford County 58
Stafford quadrangle 61
Starkey 10
Sterling 18, 20
Stonehouse 20
Stratton 46
Strom 34
Summit 58, 61
Surber 34
Surry County 14

Page.
Surry quadrangle 16
Swords Creek 55
Sycamore 28

T.

Tacoma 56
Tandy 46, 47
Taylors Valley 39
Taylorstown 36
Tazewell 45, 54
Tazewell County 13, 36, 41
Tiny 44
Tip Top 45
Toano 61
Toano quadrangle 14, 61
Toshes 29
Troutville 11
Tyson Crossroads 21, 24

U.

Union Hall 29

V.

Van Sant 44
Vicey 44, 47
Virgilina 30
Virgilina quadrangle 30–31
Virginia-Carolina Ry 38, 39
Virginia City 48

W.

Waldsboro 10
Warwick County 14, 58
Washington County 38
Washington quadrangle 21–25
Watauga 38
Watkins 27
West End 15
West Falls Church 24
Wheeler 51
Whitemarsh 15
Widewater 59, 61
Willard 18
Williamsburg 14, 16, 61
Williamsburg quadrangle 14–15
Winstead, W. R., work of 35
Wirtz 10
Wise County 41
Wise quadrangle 56
Wise Terminal R. R 56
Witherspoon, E. E., work of 17
Wittens Mill 45
Wolftrap 31
Woodbridge 59
Wright 10

Y.

York County 14, 58
Yorktown 15, 16
Yorktown quadrangle 15–16, 61
Youngs 54

Digitized by Google

Digitized by Google

Digitized by Google

3 2044 055 617 831

U.S. Geological Survey

Bulletin 562

DATE DUE	BORROWER'S NAME

Digitized by Google

Digitized by Google